

TRADE

"VASELINE"

MARK.

"VASELINE" PURE.

PENNY TINS, 8/- per gross.

TWO PENNY TINS, 15/- per gross.

No. 1 size, in boxes of 1 gross ...	18/6	"
" 1 " " " 3 dozen...	18/9	"
" 1 " " " 1 " ...	18/9	"
" 2 " " " 1 " ...	37/6	"
1-lb. tins, sealed ...	10/6	per doz.
5-lb. " " " " " "	30/-	"
10-lb. " " " " " "	5/-	per tin.
25-lb. " " " " " "	11/8	"
50-lb. " " " " " "	21/6	"

"White Vaseline."

METAL CAP BOTTLES.

Blue Seal No. 1 size ...	3/6	per doz.
3 oz. size in cartons, boxes of 1/2 doz.	6/-	"
6 oz. " " " " 1/2 doz.	10/6	"
1-lb. tins, sealed ...	20/-	"
5-lb. " " " " " "	60/-	"
10-lb. " " " " " "	9/3	per tin.
25-lb. " " " " " "	22/-	"
50-lb. " " " " " "	41/8	"

Red or "Veterinary Vaseline."

1/2-lb. tins, sealed ...	4/-	per doz.
1-lb. " " " " " "	5/6	"
5-lb. " " " " " "	22/-	"
10-lb. " " " " " "	3/6	per tin.
25-lb. " " " " " "	7/6	"
50-lb. " " " " " "	13/4	"
Half-barrels, about 1 1/2 cwt.	28/-	per cwt.
Barrels, about 3 cwt.	24/6	"

"Veterinary Carbolated Vaseline."

1-lb. tins ... 6/- doz.

"Carbolated Vaseline."

BLUE SEAL.

Screw Capped Bottles ... 5/- per doz.

"Blue Seal Pomade Vaseline."

SCREW CAPS.

No. 1 size, in boxes of 1 gross ...	20/6
" 1 " " " 3 dozen ...	21/-
" 2 " " " 1 " ...	41/-

"CAPSICUM-VASELINE."

A PERFECT SUBSTITUTE FOR MUSTARD AND
OTHER PLASTERS.

Instantly ready for use. Will not Blister the Skin.

Collapsible Tubes, one size only, including Government
Stamp, 9s. per doz.

"Perfumed White Vaseline."

New style Handsome Bottle with glass stoppers.

Boxes of 1/2 doz. ...	12/6	per doz.
Metal cap, 3-oz. size, in card case	8/6	"

"Vaseline Hair Tonic."

No. 1 size ...	9/-	per doz.
" 2 " " " " "	18/-	"
" 3 " " " " "	27/-	"

"Perfumed Vaseline Oil."

One size, in bottles (for the hair) in boxes of 1 doz.,
7/- per doz.

"Vaseline Cold Cream."

Tubes, No. 1 size ...	4/9	per doz.
" " 2 " " " "	8/3	"
No. 1 size, glass jars, in boxes of 1 doz.	3/4	"
" 2 " " " " 1 " "	5/-	"
" 3 " " " " 1/2 " "	8/3	"
" 4 " nickel-plated boxes, in boxes of 1/2 doz.	19/-	"
" 5 " glass jars ...	11/6	"
" 6 " " " " " "	16/6	"

"Vaseline Camphor Ice."

"Penny Size."—Fancy Tin Box, in boxes of 3 doz.	8/-	per gross.
Fancy Tin Box, in boxes of 1 doz.	3/0 1/2	per doz.
Fancy Tubes, in boxes of 1 doz.	3/0 1/2	"

"Vaseline Soaps."

UNSCENTED.

3d. tablets, boxes of 1/2 doz. tablets, 27/- per grss. tablets.

PERFUMED.

3d. tablets, boxes of 1/2 doz. tablets, 27/- per grss. tablets.

SUPERFINE.

Delicately perfumed, box of 3 tablets, 5/- per doz. tablets.

TAR.

3d. tablets, box of 6 tablets, 27/- per gross tablets.

"SULPHO-VASELINE."

FOR DOGS.

The latest cure for Mange and Skin Affections in Dogs.
Blend of Pure Vaseline, Sulphur, and Rect. Oil of Tar.

In Jars, 9/3 doz.; 5-lb. Tins, 48 tin; 10-lb. Tins, 8/3.

The Word "VASELINE" is the Registered Trade Mark of the

CHESEBROUGH MANUFACTURING CO.

(CONSOLIDATED), NEW YORK.

42 HOLBORN VIADUCT, LONDON, E.C.

Complete Price List sent on Application.

BRITISH MEDICAL ASSOCIATION AND "DAISY."

The British Medical Association have recently analysed a large number of headache powders. The results of Analysis, recently published, prove that "Daisy" is more carefully dispensed than any other popular headache cure, either English or American.

The Analyst takes an ordinary retail packet in each case, and gives the weights of the lightest and heaviest powders in it.

The following is a summary of the results obtained :

	Difference in weight between the lightest powder and the heaviest powder in the packet	
A. "DAISY"		•7 grain.
B. (An American wafer)	" "	•9 "
C. (An English powder)	" "	1•7 grains.
*D. (An English powder)	" "	1•8 "
*E. (An English powder)	" "	2•0 "
F. (An English wafer)	" "	2•0 "
G. (An American powder)	" "	6•0 "

The slight difference recorded in the weights of "Daisy" powders (•35 grain lighter or heavier than the average powder), is not greater than might reasonably be expected, in view of the fact that the ordinary dispensing scale is much less sensitive than the delicate balance used by analysts. It is not possible in the ordinary course of dispensing business to weigh powders more accurately than "Daisy" powders are dispensed.

The work is carried on under the personal supervision of a fully qualified Pharmaceutical Chemist, and exceptional care is taken to ensure accuracy.

DAISY, Ltd., Mammoth Works, LEEDS.

ESTABLISHED 1893.

Telegrams : "DAISY LEEDS."

AWARDS—LONDON, 1881. VIENNA, 1883. CALCUTTA, 1884. CHICAGO, 1893.

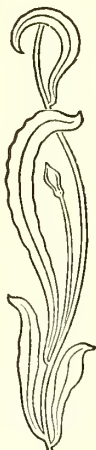
COD LIVER OIL EMULSION

WITH HYPOPHOSPHITES.

Perfect, Inseparable, & Palatable

The following Report will be read with interest:—

“I have just come across a bottle of your Cod Liver Oil Emulsion marked ‘July, 1904,’ which had been pushed away out of sight. Upon examining the contents I found them perfectly sweet and fresh even after this lapse of time. The bottle had been opened in November, 1906, and the contents tasted and found absolutely fresh, with no sign of separation, and a note to this effect was made at the time. Even now there is only the faintest perceptible appearance of separation in the Emulsion—certainly not more than $\frac{1}{8}$ th inch.”



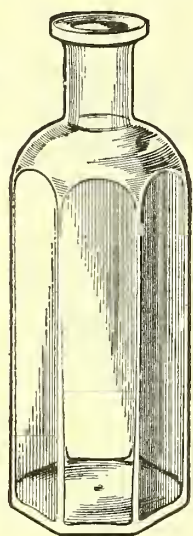
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THE BEST FOR .

Specialities & Preparations.

The several flat sides have the effect of brilliantly reflecting the contents, thus increasing the natural brightness of the preparation. This is particularly evident if seen in a good light or in a window.

A GOOD ATTRACTIVE BOTTLE WELL LABELLED AND FINISHED FREQUENTLY SELLS A PREPARATION.

Look at the Prices per Gross.



	½ oz.	1 oz.	1½ oz.	2 oz.	3 oz.	4 oz.	6 oz.	8 oz.	10 oz.	12 oz.	16 oz.	20 oz.
White Glass, Plain	4/6	5/-	5/9	6/6	7/3	8/9	10/9	13/-	15/6	17/-	22/-	27/-
White Glass, Globe Stoppered ...	18/6	19/-	20/-	20/6	21/9	24/-	28/-	31/6	34/-	37/-	44/-	48/-
Amber and Actinic, Plain	5/3	5/9	6/6	7/3	8/-	9/6	12/3	14/-	17/-	18/6	24/-	29/-
Amber and Actinic, Globe Stopp'd	19/-	20/-	20/9	21/6	22/6	25/6	29/6	33/-	36/6	39/-	47/-	52/-

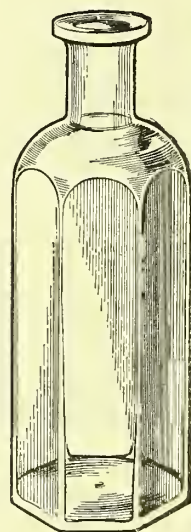
Compare these quotations with the prices of other makes, especially for the stoppered bottles.

The "Ideal" Bottles are stoppered in the same factory as they are made in, which is the only way to get the best stoppering at the lowest prices.

The "Ideal" Bottle can be obtained from Messrs. Maw's, Evans Sons Lescher & Webb, Sangers', May Roberts, J. F. Macfarlan & Co. (Edinburgh), or any other of the leading Wholesale Houses.

MADE IN ENGLAND.

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May, Roberts & Co.
Solport Bros.

CHLORIDE OF LIME

Brunner, Mond & Co., Ltd.

CHLOROFORM

Duncan, Flockhart & Co.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Morson, T., & Son
Smith, T. & H., Ltd.

CIGARS AND CIGARETTES

Hovenden, R., & Sons, Ltd.
Singleton & Cole, Ltd.

CITRIC ACID AND CITRATES

British Drug Houses, Ltd.
Howards & Sons, Ltd.
Morson, T., & Son
Sturge, John & E.

CLINICAL THERMOMETERS

Burge, Warren & Ridgley, Ltd.
Bush, H. W., & Co., Ltd.
Hicks, J. J.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Perken, Son, & Co., Ltd.
Zeal, G. H.

CLOTH BALLS

O'Neill, Zetts & Co.

COCOA

Cadbury Bros., Ltd.
Frame Food Co.
COAL TAR SPECIALITIES
Wright, Layman & Umney, Ltd.

COLD CREAM

Barnett & Co.
Parke, Davis & Co.

COLLAPSIBLE TUBE

Betts & Co., Ltd.
Brooks, Peel & Co.

COD-LIVER OIL

Albretson, A., & Co.
Allen & Hanburys, Ltd.
Baiss Bros. & Stevenson, Ltd.
British Drug Houses, Ltd.
Charity, W., & Sons
Devold, Peder
Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Lloyd, T. Howard, & Co.
Oldfield, Pattinson & Co.
Southall Bros. & Barclay, Ltd.
Woolley, J., Sons & Co., Ltd.
Wright, Layman & Umney, Ltd.
Zimmermann, A. & M.

COMBS

Hovenden, R., & Sons, Ltd.
Kent, G. B., & Sons, Ltd.
Maw, S., Son & Sons
May, Roberts & Co., Ltd.

COLOURS, BEVERAGE, &c.

Stevenson & Howell, Ltd.
(See also DAIRY ADJUNCTS)

CONDENSERS

Bennett, E., & Son, Ltd.
Bennett, Sons & Shears, Ltd.

CORN CURE

Outem Corn Remedy Co.

CORRUGATED PAPER

Eburite Paper Co.
Timme, W. O., & Co.

CORKS

Ayrton, Saunders & Co.
Mitchell, N. W., & Sons, Ltd.

COUNTER ADJUNCTS

Evans Sons Lescher & Webb, Ltd.

COUNTER BILLS

Ford, Shapland & Co.

COUNTER SPECIALITIES

Allen & Hanburys, Ltd.
British Drug Houses, Ltd.
Hewlett, O. J., & Son
Lloyd, T. H., & Co., Ltd.
Newbery, F., & Sons, Ltd.
Southall Bros. & Barclay, Ltd.

CREAM OF TARTAR

British Drug Houses, Ltd.

CREOSOTE

Baiss Bros. & Stevenson, Ltd.
Burt, Boulton & Haywood
Morson, T., & Son

CREPE BANDAGE

Gimber, W., & Son
Norwich Crepe Co. (1856), Ltd.
Wood, Vincent

CYANIDES

May & Baker, Ltd.

DAIRY SPECIALITIES

Fullwood, R. J., & Bland
Oldfield, Pattinson & Co.

DENTAL MECHANICS

Barker, Fred. H.
Cullwick, H. E.
Fentiman, A. G.
Fentiman, A. J., & Co.
Halder, E. O.
Wardale & Co.

DENTIFRICES

Beecham, T.
Beiersdorf, P., & Co.
Bell, John, Hills & Lucas, Ltd.
Blackie, R.
Burrage Wellsome & Co.
Calvert, F. C., & Co.
Christy, T., & Co.
Cook, E., & Co., Ltd.
Eucryl, Ltd.
Hall & Ruckel
"Irex" tooth-powder
Jewsbury & Brown
Lambert Pharmacal Co.
McKesson & Robbins
Martindale, W.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Odol Chemical Works
Rowland, A., & Sons
Standard Tablet & Pill Co.
Woods, W., & Son
Woolley, J., Sons & Co., Ltd.

DEVELOPERS

Express Developing Co.

DISINFECTANTS

Baiss Bros. & Stevenson, Ltd.
Burt, Boulton & Haywood, Ltd.
Calvert, F. C., & Co.
Condy & Mitchell, Ltd.
Cook, E., & Co., Ltd.
Dalmas, A. de St., & Co.
Edwards, W., & Son
Jeyes' Sanitary Compounds, Ltd.
Kay Bros., Ltd.
Lambert Pharmacal Co.
Sanitas Co., Ltd.
Tomlinson & Hayward, Ltd.
Willows, Francis B. & T.
Wright, Layman & Umney, Ltd.
Zimmermann, C., & Co.

DEXTRINE

Pink, F., & Co.

DOSE REGULATORS

Maw, S., Son & Sons
Reuter, R. J.

DIABETIC BREAD AND FOOD

Brusson Jeune
Callard & Co.

DIGESTIVE PRODUCTS

Armour & Co., Ltd.

DIGESTIVE PRODUCTS

Benger's Food, Ltd.
Fairchild Bros. & Foster
Parke, Davis & Co.
Squire & Sons
Zimmermann, C., & Co.

DRUGGISTS' SUNDRIES

Ayrton, Saunders & Co., Ltd.
Barclay & Sons, Ltd.
Berliner, Arthur
Burge, Warren & Ridgley
Bush, H. W., & Co., Ltd.
Chemist's Co-operative Wholesale
Christy, T., & Co.
Edwards, W., & Son
Evans Sons Lescher & Webb, Ltd.
Hewlett, O. J., & Sons
Hovenden, R., & Sons, Ltd.
Maw, S., Son & Sons
May, Roberts & Co., Ltd.
Newbery, F., & Sons, Ltd.
Poths, H., & Co.
Queloh, H. O., & Co.
Reuter, R. J.
Sangers
Schutze, F., & Co.
Shirley Bros., Ltd.
Solport Bros.
Southall Bros. & Barclay, Ltd.
Tidman & Son, Ltd.
Toogood, W., Ltd.
Viscose Co., Ltd.
Wattenbach, O.
Wood, Vincent
Woolley, J., Sons & Co.

DRUGS, CRUDE

Baiss Bros. & Stevenson, Ltd.
Carmichael, F. J., & Co.
Gathergood's Exor.
Hornor & Sons
Hymans, H., & Co.
Morrison, R., & Co.
Potter & Clarke, Ltd.
Ransom, W., & Son
Salle, H., & Co.

DRYSALTERIES

Harker, Stag & Morgan, Ltd.

DYES

Judson, D., & Son
Whitaker & Co. (Hat)

EAR MOPS.

Cooper, R. H., & Co.

EAU DE COLOGNE

Farina, J. M.
Farina, J. M. (No. 4)
Fickus, Courtenay & Co.
McCracken, J. & R.
Schutze, F., & Co.

EDUCATIONAL INSTITUTIONS

Bath and West of England College of Pharmacy
Borough Polytechnic
British Optical Institute
Edinburgh Central School of Pharmacy
Glasgow School of Pharmacy
Leeds College of Pharmacy
Liverpool School of Pharmacy
London College of Pharmacy
Manchester College of Pharmacy
Muter's (So. Lond.) School of Pharmacy
North of England School of Pharmacy
Northern College of Pharmacy
Nottingham School of Pharm.
Pharmaceutical Society's School of Pharmacy
South of England College of Pharmacy

EFFERVESCENT PREPS.

Allen & Hanburys, Ltd.
Bishop, Alfred, Ltd.
Blackie, R.
Bristol-Myers Co.
Cox, A. H., & Co., Ltd.
Davies, Sons & Co.
Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Howards & Sons, Ltd.
Kutnow, S., & Co., Ltd.
Newball & Mason
Potter & Clarke
Standard Tablet & Pill Co.
Sturge, John & E.
Tyrer, T., & Co., Ltd.
Wright, Layman & Umney

EMERY AND CLOTH
Oakley, J., & Sons, Ltd.

ENTOMOLOG. APPARATUS
Watkins & Doncaster

EPSOM SALTS
Howards & Sons, Ltd.

EMULSIONS, C.L.O., ETC.
Allen & Hanburys, Ltd.
Ayrton, Saunders & Co., Ltd.
Baiss Bros. & Stevenson, Ltd.
Blackie, Robert
British Drug Houses, Ltd.
Faulding, F. H., & Co.
Harker, Stagg & Morgan, Ltd.
Lorimer & Co., Ltd.
Oldfield, Pattinson & Co.
Parke, Davis & Co.
Scott & Bowne, Ltd.
Southall Bros. & Barclay, Ltd.
Tolkien, C., & Co.
Woolley, Jas., Sons & Co.

ELASTIC HOSIERY
Ayrton, Saunders & Co., Ltd.
Berliner, Arthur
Burge, Warren & Ridgley, Ltd.
Haywood, J. H.
Maw, S., Son & Sons
Wood, Vincent

ELECTROPLATING
Galvanit Mnf. Co.

ENEMAS
Bailey, W. H., & Son
Burge, Warren & Ridgley
Daval Rubber Co.
Maw, S., Son & Sons
Toogood, W., Ltd.
Warne, W., & Co., Ltd.

ESSENCES, CONCRETE
Lantier Fils
Murray, O., & Co., Ltd.
Sohmoller & Bompard

ESSENCES, SOL. AND FRUIT
Alliance Drug & Chem. Co.
Barnett & Foster
Bush, W. J., & Co., Ltd.
Evans Sons Lescher & Webb
Fuerst Bros.
Hay, Wm., Ltd.
Lantier Fils
London Essence Co.
Lorimer & Co., Ltd.
Meggeson & Co., Ltd.
Newball & Mason
Spencer, J., Son & Co.
Stevenson & Howell, Ltd.
Zimmermann, A. & M.

ETHERS
Baies Bros. & Stevenson, Ltd.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Tyrer, T., & Co., Ltd.
White, A., & Sons

EUCALYPTUS OIL
Baiss Bros. & Stevenson, Ltd.
British Drug Houses, Ltd.
Hymans, H., & Co.

EXTRACT OF HERBS
Newball & Mason
Potter & Clarke

EXTRACTS (MEDICINAL)
Allen, Stafford, & Sons, Ltd.
Chemist's Co-operative Wholesale
Gathergood's Exor.
Hewlett, C. J., & Son
Parke, Davis & Co.
Ransom, W., & Son
(See also WHOLESALE DRUGGISTS)

FEEDING BOTTLES
Brefitt, E., & Co., Ltd.
Evans Sons Lescher & Webb, Ltd.
Hovenden, R., & Sons, Ltd.
Kilner Bros., Ltd.
Maw, S., Son & Sons
Sangers'
Selport Bros.
Southall Bros. & Barclay, Ltd.

FERTILISERS
With's Chemical Manure Co.

FILTERS, ASBESTOS
Seitz, Theo.

FILTERS (WATER)
Berkefeld Filter Co., Ltd.

FLY-CATCHERS
Deansmere Manfg. Co.
Ford, Shapland & Co.
Frowein, C.
Kay Bros., Ltd.
Plöttner & Franke
Smith, J. H., & Co.
Tunbridge & Wright

FOODS, INFANTS'
Allen & Hanburys, Ltd.
Benger's Food, Ltd.
Frame Food Co., Ltd.
Lofthouse & Saltmer
Natural Food Co., Ltd.
Willows Francis B. & T.

FLESH GLOVES
Sangers'
Solport Bros.

FOODS, SPECIAL
Allen & Hanburys, Ltd.
Bayer Co., Ltd.
Benger's Food, Ltd.
Brand & Co., Ltd.
Brusson Jeune
Burt, C. J.
Bvvo, Ltd.
Callard & Co.
Fairchild Bros. & Foster
Frame Food Co., Ltd.
Menley & James, Ltd.
Natural Food Co., Ltd.
Wander, A.

FRUIT SYRUPS
Idris & Co., Ltd.

FULLER'S EARTH
Mumford, G. S., & Sons

GELATIN AND GLUE
Boehm, F., Ltd.

GLASSWARE, CHEMICAL
Zahradnik, Jos.

GLAUBER'S SALT
Bramwell, E., & Son
Howards & Sons, Ltd.

GLYCERIN
Boehm, F., Ltd.
Fuerst Bros.

GLYCERIN PLANT
Forshaw, E., & Son, Ltd.

GOLD PAINT
Judson, D., & Son

GOLDBEATER'S SKIN
Gutmann & Leslie Gates

GRINDERS
Allen, Stafford, & Sons, Ltd.
Goodall, Backhouse & Co.
Willows, Francis, B. & T.

GUMMED PAPER TAPE
Gosheron, John, & Co.

GUMS
Fink, F., & Co.

HAIR PREPARATIONS
Capnoids (1909), Ltd.
Chesebrough Manfg. Co.
Edwards' "Harlene" Co.
Egglossa Mnf. Co.
Harker, Stagg & Morgan
Herplioide Co.
John Strange Winter
Robare's Andreoline
Rowland, A., & Sons
To-Kalon Mnf. Co., Ltd.

HAT DYES
Whitaker & Co.

HEATING APPARATUS
Clark, S., & Co.
Reuter, R. J.

HERBS
Carmichael, F. J., & Co.
Potter & Clarke, Ltd.

HOMOEOPATHIC MEDICINES
Ashton & Parsons, Ltd.
Epps, James, & Co.
Keene & Ashwell, Ltd.
Leath & Ross

HOTELS
Edmond Hotel
Kingsley Hotel
Thackeray Hotel

HOT-WATER BOTTLES
Berliner, Arthur
Burge, Warren & Ridgley
Dnlop Rubber Co., Ltd.
Fnlham Pottery & Cheavin
Filter Co., Ltd.
Galen Mfg. Co., Ltd.
Hntochinson Co.
Maw, S., Son & Sons
May, Roberts & Co.
Newbery, F., & Sons, Ltd.
Southall Bros. & Barclay
Tompkins, Jamee, Ltd.
Wood, Vincent

HYDROGEN PEROXIDE
May & Baker, Ltd.
Sanitas Co., Ltd.
Tyrer, T., & Co., Ltd.

HYPOPHOSPHITES
May & Baker, Ltd.
Tyrer, T., & Co., Ltd.

INHALERS
Maw, S., Son & Sons.

INSECT POWDER
Boehm, F., Ltd.
Carmichael, F. J. & Co.
Smith, B. A., & Co.

IODINE AND IODIDES
Howards & Sons, Ltd.
Morson, T., & Son

ITROSYL
Fletcher, Fletcher & Co.

INSECTICIDES
Acme Chemical Co., Ltd.
Christy, Thos., & Co.
Smith, B. A., & Co.
Tomlinson & Hayward, Ltd.

JARS AND POTS
Brefitt, E., & Co., Ltd.
Bush, H. W., & Co., Ltd.
Christy, T., & Co.
Johnsen & Jorgensen, Ltd.
Kilner Bros., Ltd.
Lang, Jules, & Son
Maw, S., Son & Sons
Poths, H., & Co.
Reuter, R. J.
Stipendium Stopper Co.
Toogood, W., Ltd.

LACTIC FERMENTS
Allen & Hanburys, Ltd.
Cox, Arthur H., & Co., Ltd.
Davies, Sons & Co.
Lloyd, T. Howard, & Co.
Martindale, W.
Parke, Davis & Co.
Standard Tablet Co.
Wileox, Jozean & Co.

LAMPS, PARABOLIC
Bruce, F. & J.

LANOLINE
Bnrronghs Wellcome & Co.
Christy, T., & Co.

LARD
Chemist's Co-operative Wholesale
Ewen, J., & Sons

LIME JUICE AND CORDIAL
Evans Sons Lescher & Webb
Goodall, Backhouse & Co.
Idris & Co., Ltd.

LINSEED, CRUSHED, ETC.
Allen, Stafford, & Sons
Mumford, G. S., & Sons

LINTS
Liverpool Lint Co.
May, Roberts & Co., Ltd.
Robinson & Sons, Ltd.
Vernon & Co., Ltd.

LIQUORICE JUICE
Boehm, F., Ltd.
British Drug Houses, Ltd.
Carmichael, F. J., & Co.
Evans, Gray & Hood
Fuerst Bros.
Evans Sons Lescher & Webb, Ltd.
Horner & Sons
Jackson, E. E.
Mumford, G. S., & Sons

LIQUORS, CONC., ETC.
Allen, Stafford, & Sons, Ltd.
Fletcher, Fletcher & Co.
Hewlett, C. J., & Son
Robinson, B., & Co.

LITHIA SALTS
British Drug Houses, Ltd.
Fuerst Bros.
May & Baker, Ltd.
Merok, E.

LOOFABS
International Sponge Importers

LOZENGES
Cox, A. H., & Co., Ltd.
Denoual, J., & Co.
Jackson, E. E.
Meggeson & Co., Ltd.
Potter & Clarke, Ltd.
Raines & Co.
Warrick Bros.

MACHINERY, PHARMACAL
Allen & Hanburys, Ltd.
Bennett, E., & Son, Ltd.
Bennett, Sons & Shears, Ltd.
Braithwaite, H., & Co., Ltd.
Forshaw, E., & Son, Ltd.
Gardner, Wm., & Sons, Ltd.
Pindar, J. W., & Co.
Smith, B. A., & Co.
Stokes, F. J., Machine Co.
Thompson & Capper (Stokes)
Wilkinson, S. W., & Co.

MAGNESIA AND ITS SALTS
Henry, T. & W.
Howards & Sons, Ltd.
May & Baker, Ltd.
Parke, Davis & Co.
Washington Chemical Co.

MENTHOL CONES
Bush, H. W., & Co., Ltd.
Lubenow, Hugo, Ltd.
Maw, S., Son & Sons

MAILING CASES
Estee, E. B., & Sons

MALT EXTRACT AND PREPS
Allen & Hanburys, Ltd.
Blackie, R.
British DiaMalt Co.
Bnrronghs Wellcome & Co.
Evans Sons Lescher & Webb
Hewlett, C. J., & Son
Lorimer & Co., Ltd.
Montgomerie & Co., Ltd.
Oppenheimer, Son & Co., Ltd.
Paine & Co., Ltd.
Southall Bros. & Barclay, Ltd.
Woolley, Jas., Sons & Co., Ltd.
Wright, Layman & Umney

MARKING INK
Hickisson, A. (Bond's)

MEDICINE CHESTS
Bnrronghs Wellcome & Co.
Keene & Ashwell, Ltd.
Leath & Ross
Lloyd, T. Howard, & Co.
Parke, Davis & Co.

MEASURES
Beaton & Co.
Bush, H. W., & Co., Ltd.

MEAT EXTRACTS
Armour & Co., Ltd.
Brand & Co., Ltd.

MERCURIALS
Howards & Sons, Ltd.
May & Baker, Ltd.
Merok, E.
Tyrer, T., & Co., Ltd.

METEOROLOGICAL SETS
Darton, F., & Co.

METHYLATED SPIRIT
Bnrrongh, J., Ltd.
Preston's Liverpool Distillery
Randall & Son, Ltd.

MINERAL WATERS AND SALTS
Apollinaris Co., Ltd.
British Drug Houses, Ltd.
Cheltenham Municipality
Findlater & Co., Ltd.
Hughes, E. Griffiths
Ingram & Royle, Ltd.
Vichy (State Springs)

MIRRORS, TOILET
Sangers

MOTOR GOGGLES
Darton, F., & Co.

OILS, ESSENTIAL
Allen, Stafford, & Sons, Ltd.
Alliance Drug & Chem. Co.
Bush, W. J., & Co., Ltd.
Chiris, Antoine
Dodge & Olcott Co.
Evans Sons Lescher & Webb, Ltd.
Fuerst Bros.
Horner & Sons
Jackson, J., & Co.
Lantier Fils
Lhermine & Cie
London Essence Co.
Macajone, Eugenio, & Co.
Morrison, R., & Co.
Muhlethaler, Th., Ltd.
Pasquale, S. F. de, & Fratelli
Poppelreuter, W.
Ransom, W., & Son
Scheller, Emil, & Co.
Schimmel & Co.
Schmoller & Bompard
Seymour, J.
Spencer, J., Son & Co.
Stevenson & Howell, Ltd.
Whittaker, Arthur
Wright, Layman & Umney
Zimmermann, A. & M.

OILS, FATTY, ETC.
Allen, Stafford, & Sons, Ltd.
Fuerst Bros.
Price's Patent Candle Co.
Schliemann's Oil & Ceresine Co.
Smith, B. A., & Co.
Wood, Chas. E.

OILS, MINERAL
Carmichael, F. J., & Co.
Fuerst Bros.
Price's Patent Candle Co.

OINTMENTS
Blackie, R.
Calvert, F. C., & Co.
Chemist's Co-operative Wholesale
Lyle & Co.
Oldfield Pattinson & Co.

OPTICAL GOODS
Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Nitsche & Gbther
Raphael's, Ltd.

OPTICAL INSTRUCTION
British Optical Institute

OTTO OF ROSE

Bontcheff & Kidoff
Reitmeyer & Co. (synthetic)
Orozoff, P., & Fils
Seraphimoff, S., & Co.
Shinkoff & Co.

ORANGE WINE

Melrose-Drover Co., Ltd.

OXGEN GENERATOR

Oppenheimer, Son & Co., Ltd.

OZONE GENERATOR

Reuter, R. J.

PALATINOLIDS

Oppenheimer, Son & Co.

PAPER TUBES

O'Neill, S., & Sons, Ltd.

PERFUMES

Allen & Hanbury, Ltd.
Barclay & Sons, Ltd.
Barnett & Co.
Bronnley, H., & Co., Ltd.
Bush, W. J., & Co., Ltd.
Christy, T., & Co.
Chuit, Naef & Co.
Erasmie Co., Ltd.
Evans Sons Lescher & Webb, Ltd.
Hewlett, C. J., & Son
Hovenden, R., & Sons, Ltd.
John Strange Winter
Lescol Perfumery Co.
McCracken, J. & R.
Maw, S., Son & Sons
Morrison, G. H., & Co., Ltd.
Newbery, F., & Sons, Ltd.
Quelch, H. C., & Co.
Southall Bros. & Barclay
Spencer, J., Son & Co.
To-Kalon Mfg. Co., Ltd.
Warrick Bros.
West, T., & Son

PASTILLES

Allen & Hanbury, Ltd.
Asche, C. F., & Co.
Burroughs Wellcome & Co.
Denoual, J., & Co.
Epps, James, & Co.
Evans Sons Lescher & Webb
Meggeson & Co., Ltd.
Wander, A.
Warrick Bros.

PATENT AGENT

Barker, R. W.

PETROLEUM EMULSION

British Drug Houses, Ltd.

PETROLEUM JELLY

Carmichael, F. J., & Co.
Cheesebrough Mfg. Co.
Schliemann's Oil & Ceresine Co.

PERFUME MATERIALS

Bontcheff & Kidoff
Bush, W. J., & Co., Ltd.
Chris, Antoine
Compagnie Morana
Lautier Fils
Mühlethaler, Th., Ltd.
Murray, O., & Co., Ltd.
Scheller, Emil & Co.
Schimmel & Co.
Shipkoff & Co.
Spencer, J., Son & Co.
Zimmermann, C., & Co.

PESSARIES

Burge, Warren & Ridgley
Rendell, W. J.

PHOTO. CHEMICALS

Boehringer, O. F., & Soehne
Burroughs Wellcome & Co.
Merck, E.
Reitmeyer & Co.

**PHOTO. ENLARGERS,
PRINTERS, & C.**

Express Developing Co.
Halifax Photographic Co.

PHOTO. GOODS

Barclay & Sons, Ltd.
Darton, F., & Co.
Evans Sons Lescher & Webb, Ltd.
Halifax Photographic Co.
Hilford, Ltd.
Kent, G. B., & Sons, Ltd.
Lennon, Ltd.
May, Roberts & Co.
Newbery, F., & Sons, Ltd.
Reitmeyer & Co.

PILL BOXES

Evans Sons Lescher & Webb, Ltd.

PLASTERS

Allcock Mfg. Co.
Berliner, Arthur
Beiersdorf, P., & Co.
Dalmas A. de St., & Co.
Leslies, Ltd.
Maw, S., Son & Sons
Solport Bros.

PILL COUNTERS

Bornkessel, F. G.

PILL MAKERS

Allen & Hanbury, Ltd.
Asche, C. F., & Co.
Bishop, Alfred, Ltd.
British Drug Houses, Ltd.
Cox, A. H., & Co., Ltd.
Davies, Sons & Co.
Howards & Sons, Ltd.
Lloyd, T. Howard, & Co.
McKesson & Robbins
Parke, Davis & Co.
Standard Tablet & Pill Co.
Wand Mfg. Co.

POCKET SPITTOON

Sanitas Co., Ltd.

POLISHES (VARIOUS)

Bradley & Bourdas
Judson, Daniel, & Son
Oakley, J., & Son, Ltd.

PROPRIETARY ARTICLES

Anglo-American Drug Co.
Ashton & Parsons, Ltd.
Barclay & Sons, Ltd.
Bayer Co., Ltd.
Beecham, T.
Beiersdorf, P., & Co.
Box, W. H.
British Drug Houses, Ltd.
Burgess, E.
Capsuloids (1909), Ltd.
Chameleon Oil Co., Ltd.
Christy, T., & Co.
Coleman & Co., Ltd.
Congreve, G. T.
Conoid Co.
Cox, A. H., & Co., Ltd.
Curry, Henry
Daggett & Rameadell
Daisy, Ltd.
Danyz Virns, Ltd.
Da Silva & Co.
Davenport, J. T., Ltd.
Day & Sons (Crewe), Ltd.
Denoual, J., & Co.
Essolent Compounds, Ltd.
Edwards, W., & Son
Evans Sons Lescher & Webb, Ltd.
Faulding, F. H., & Co.
Fellows' Syrup
Fennings, Alfred
Fennis & Co.
Fulford, C. E., Ltd.
Goodall, Backhouse & Co.
Gordon, Murray & Co., Ltd.
Guy's Tonic Co.
Harvey & Co. (Dublin), Ltd.
Henry, T. & W.
Hovenden, R., & Sons, Ltd.
Hughes, E. Griffiths
Ichthyol Co.
International Chemical Co.
Iron-Ox Rem. Co., Ltd.
Kay Bros., Ltd.
Kintow, S., & Co., Ltd.
Lalor, S. Dr., Phosphodyns
Lambert Pharmacol Co.
Lofthouse & Saltmer
Lorimer & Co., Ltd.
Martindale, W.
May, Roberts & Co.
Menley & James, Ltd.
Newbery, F., & Sons, Ltd.
Odo Chemical Works
Owbridge, W. T., Ltd.
Pedacy Co.
Phillips, Chas H., Chem. Co.
Quinine Bitters Mfg. Co., Ltd.
Reitmeyer & Co.
Resinol Chemical Co.
Sangers'
Sartolin, Ltd.
Schiimmel & Co.
Scott & Bowne, Ltd.
Squire & Sons
Standard Tablet & Pill Co.
Stedman's Teething Powders
Sterling Remedy Co.
Thompson & Capper
Tunbridge & Wright
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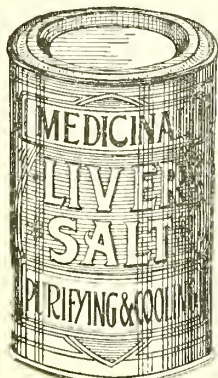
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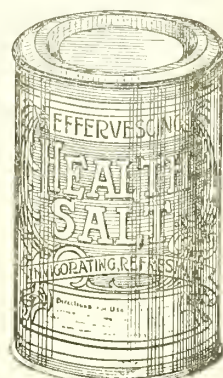
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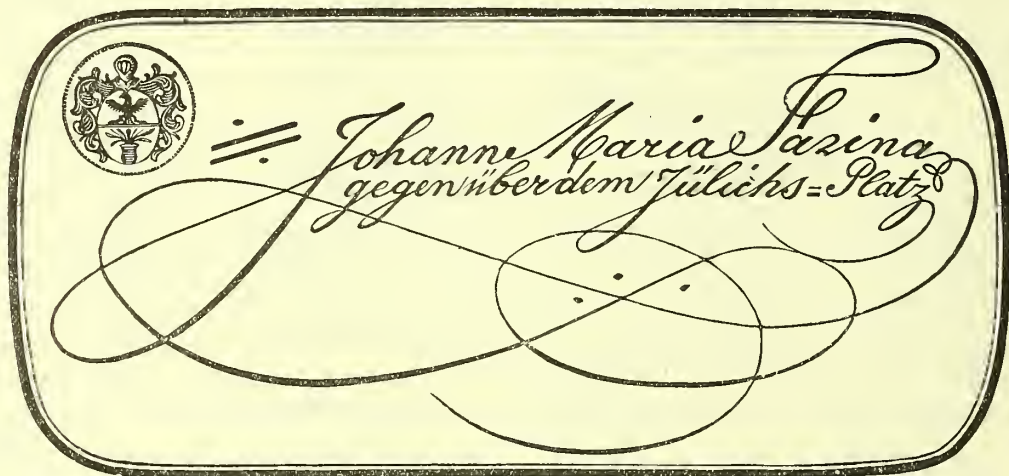
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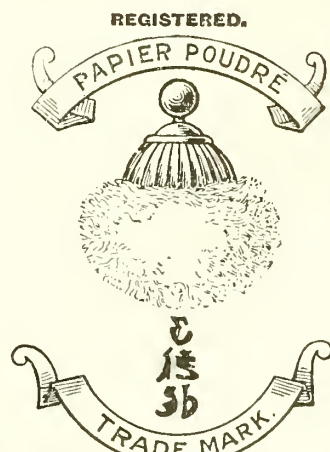
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1/2 doz. 1/- EGGLOSSA BRILLIANTINE @ 8/-

These have a ready sale in many parts, and will realise 18/- for an outlay of 8 -

Only one order at these prices can be supplied to any one shop.

THE EGGLOSSA MFG. CO.
GLOUCESTER ROAD, BRISTOL.

BEETHAM'S "LAROLA"

(Registered)

Is the Skin Tonic for 1910.

It is effective.

It is attractive.

It is price-protected.

It is well-advertised.

It sells readily.

It bears a good profit.

HAVE YOU OUR SHOWCARD ?

THIS IS WHAT THE "C. & D." SAYS OF IT:—

BEETHAM'S NEW SHOWCARD.—One of the prettiest lithographic productions which have come to us lately is the Larola beauty here depicted. The card measures 24 in. by 18 in., and is all roses, even the word "Larola" being formed from prickly rose-stems. The fair rose-gatherer has rosy cheeks, and she and the setting make so bright a picture that no pharmacy will be complete without it. Copies can be obtained from Messrs. M. Beetham & Son, Cheltenham, the originators of Glycerine-and-Cucumber and Larola.

This handsome Show Card, in 14 colours (size 24 by 17), can be had by any chemist who will give it a good place in his pharmacy.

M. BEETHAM & SON, Cheltenham.

A new Invention of Great Utility.

"LUTON" HAT DYES

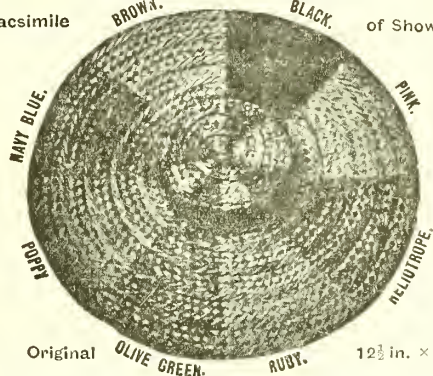
No Gloss. No Polish. Dry at once. Resist rain.

Facsimile

BROWN.

BLACK.

of Showcard.



Original

OLIVE GREEN.

RED.

12½ in. x 10 in.

In bottles, 6d. each, in separate neat cartons, with suitable brush

These Dyes are a distinct invention, dying the straw without an objectionable varnished appearance, and producing the effect of new goods.

Write for terms and patterns:

WHITAKER & CO.

COLOUR WORKS, KENDAL, ENG.

London Depot: 8 MILK STREET, CHEAPSIDE, E.C.

SPECIALISTS IN VARNISHES, STAINS, DYES, &c. ESTD. 1878.

Colonial Testimonial—"Your 'Lutons' have really come up to the mark."—Geo. H. Langton, Port of Spain, Trinidad.

Samuel O'Neill & Sons, Ltd.

CASTLETON, Near MANCHESTER.

MAKERS OF

TOILET ROLLS.

Patentees and Makers of Paper Tubes for
Flax, Cotton, Woollen, Worsted & Silk Spinners,
Winders, &c.

The number of dentifrices is myriad, their names are legion,

But—

in principle and in efficiency there is but one,

CALOX

THE OXYGEN TOOTH POWDER.

Its principle is the evolution of oxygen.

Its efficiency as a cleanser of the teeth is due to the oxygen which it generates when used.

Not only antiseptic, but deodorant, two desirable properties of a tooth powder. Its oxidizing and deodorizing power was obvious in our experiments.—THE LANCET, London, Eng.

Possesses not only strong antiseptic, but deodorizing and oxidizing properties, as the result of which the teeth, after a few days' use of CALOX, acquire a pearly whiteness.—THE CHEMIST AND DRUGGIST, London.

CALOX is entirely different from other dentifrices. Its introduction marks a decided advance in the scientific development of a dentifrice, a fact which the dental profession the world over has been quick to recognise. Chemists should interest themselves in Calox because only a chemist can explain the peculiar virtues and value of an oxygen-producing dentifrice.

Price to the trade, 9/6 per dozen on the P.A.T.A. plan.

McKESSON & ROBBINS, New York, U.S.A., Manufacturers.

BRITISH DEPOT—G. B. KENT & SONS, Ltd., 75 Farringdon Road, London, E.C.

Stock the articles which
your customers require
—and will ask for again.
Among these

CALVERT'S Carbolic Tooth Powder

occupies, of course, a prominent
position all over the world.

And there is a good demand
too for the other specialties,
Carbolic Soaps, Ointment, Dis-
infectants, &c., made by F. C.
Calvert & Co., Manchester,
England.

Illustrated Price List post free
on request.



BIDWELLS' GOLD MEDAL TOOTH BRUSHES.

ILLUSTRATED CATALOGUE FREE ON APPLICATION.

HEAD OFFICE AND FACTORIES: ESTD.
AXMINSTER, DEVON. 1839.

SUPPORT HOME INDUSTRIES.

Estd. 1777.



Incl. 1900.

BUY

KENT'S

BRUSHES.

Winter Issue, 1909, pp. 86, 87.
Diary, 1909, pp. 46, 47.

The Lescol Perfumery Co.

FINEST CONCENTRATED PERFUMES

PARMA VIOLETS, JOCKEY CLUB, OPOPONAX, NEW MOWN HAY
RUSSIAN VIOLETS, SWEET PEA, WHITE ROSE, WALLFLOWER,
and all varieties of exceptional value.

Speciality: "NICOSIA."

No. AA 1 1 oz. ...	10/3 per doz. *1/3 each	No. AA 3 3 oz. ...	23/3 per doz. *2/9 each.
No. AA 2 2 oz. ...	17/- per doz. *1/9 each	No. AA 4 4 oz. ...	29/- per doz. *3/6 each.
No. AA 5 8 oz. ...		53/9 per doz. *6/- each.	

*P.A.T.A. Prices.

We have been extensively advertising "NICOSIA" in the principal periodicals and magazines to create an interest which should lead to Chemists receiving inquiries for this speciality.

Illustrated Price Lists on application to

GEORGE ST., CAMBERWELL GREEN, LONDON, S.E.

LOTIL SOAP.

All soaps hitherto introduced are simple combinations of alkali and fatty acids, which in the presence of water undergo dissociation. The alkali, thus set free, acts deleteriously on the skin, removing the natural fat, and creating a sensation of dryness and tension.

LOTIL SOAP possesses properties the exact opposite. The skin, after the lather has been thoroughly rubbed in, acquires an imperceptible coating of fat, and the sensation after rinsing and drying is that of smoothness and suppleness. A free sample will enable you to prove this.

Write for Price List, WITH BONUS SCHEME, to the Agents:—

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Essential Oils.

Neroli, Petit Grain, Lavender,
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POMADES.

PERFUMES.

E. Dhermine & Cie.
NICE, FRANCE.

"ODOURESSENCES" and
CONCENTRATED PERFUMES
free from Alcohol.

Sole Agents for U.K.—

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LONDON, E.C.

EVERY GENUINE PACKAGE



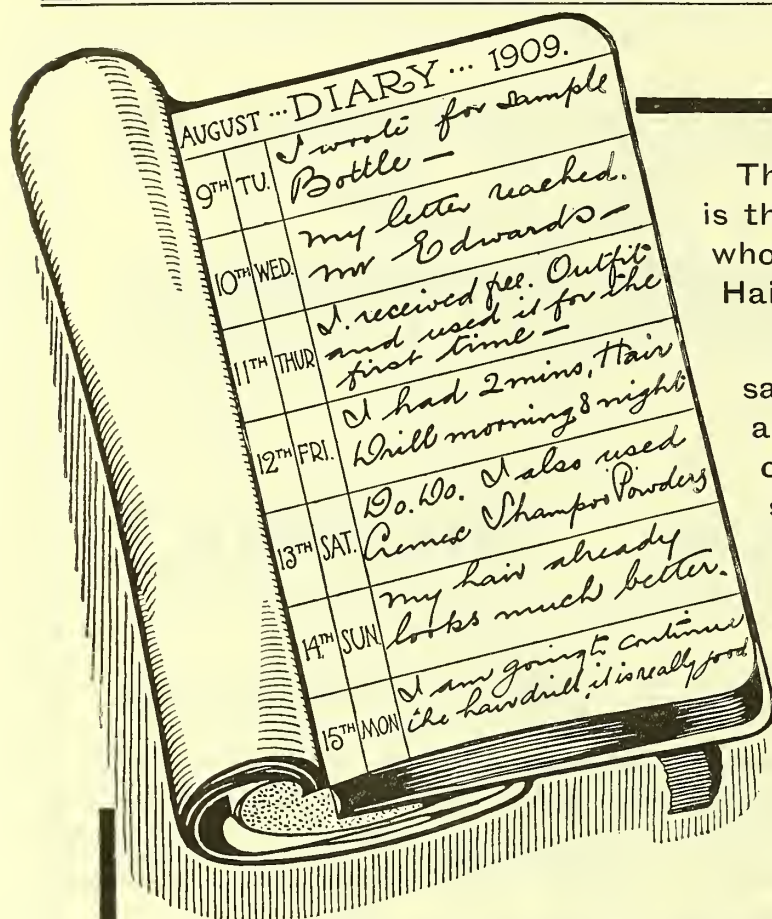
EWEN'S LARD

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ONLY LARD
that
is made exclusively
for pharmaceutical
and Perfumery
preparations,
and is the

**BEST AND
MOST RELIABLE**

Guaranteed B.P.
Lard on the Market.

BEARS THIS LABEL



The last item in this diary is the usual remark of people who have sampled Harlene Hair Drill.

We issue millions of samples all over the country and you should be receiving your share of the sales that must essentially follow.

May we send you some advertising matter to remind your customers that you sell our goods?

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'HARLENE HAIR DRILL'

THE SECRET OF BEAUTIFUL HAIR.

"HARLENE."

FOR THE HAIR.

	Retail	Wholesale.
No. 1 size	1/-	11/- doz.
" 2 "	2/6	27/3 "
" 3 "	4/6	47/- "

"UZON."

BRILLIANTINE.

	Retail.	Wholesale.
1/-	11/- doz.
2/6	27/3 "
-	-	-

"CREMEX."

SHAMPOO POWDERS.

	Retail.	Wholesale.
1/-	11/- doz.

Per box of 6 Powders.

SPECIAL.—FULL DISCOUNT OF 20% OFF TRADE PRICES TO ALL BUYERS OF £2 (NET), CASH WITH ORDER. CARRIAGE PAID.

We are prepared to supply a special trial order, to the value of £2, made up as required, and cash with order. With this we will include one gross of Free trial packages for distribution and good supply of dummies, showcards, &c., for exhibition.

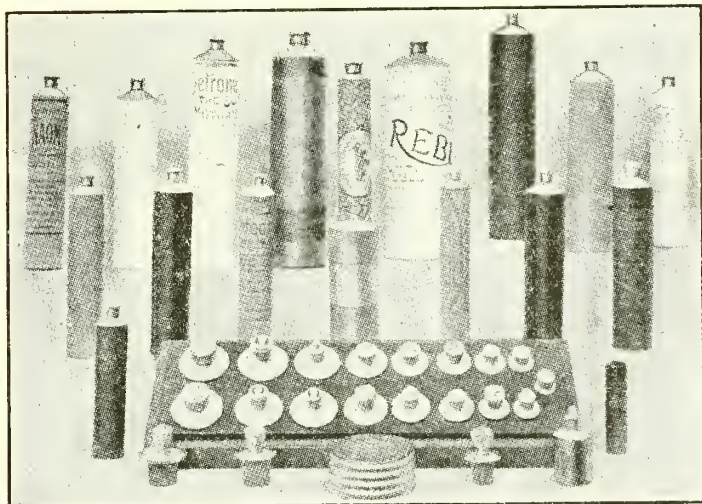
£2 parcel may be assorted according to customer's wishes.

Fully illustrated Price List, quoting all productions, sent post free on application to:

EDWARDS' HARLENE CO., 95 & 96 HIGH HOLBORN, LONDON, W.C.

Quality & Price in Tubes

Quality is of primary importance in Collapsible Tubes, Sprinkler Corks, Shaving Stick Tubes, and all Druggists' Metal Goods; and given quality, the next consideration is a reasonable price.



Our experience of more than 100 years and our reputation are sufficient to assure you of obtaining goods upon the quality of which you may rely absolutely: the largest factory in the world, a staff of 800 hands and the scale on which we buy our raw material enable us to give you an advantage in price as well.

Have you seen our Patent Adhesive Capsule, which cannot be removed without destroying it?

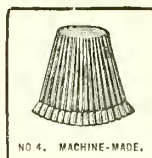
Absolute guarantee of purity of the contents.

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PLEATED BOTTLE CAPS.

PLEATED PAPER
BOTTLE CAPS.

All sizes.



REDUCED PRICES.

Cheapest and Best
on the Market.

For
**CHEMISTS,
BREWERS,
&c.**

Also Manufacturers of DISH & DESSERT PAPERS, LACE BANDS, &c.

WHOLESALE and EXPORT only of

DARTER, WILKINSON & CO. 23, 24, 25 SANDLAND STREET,
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Ask your Wholesale House for D. W. & Co's Caps.

BOTTLE-CAPS

Made from Genuine Goldbeater's-Skins.

WHITE, Transparent and Coloured
Apply for Wholesale Prices.

*Goldbeater's-Skin for Medical Purposes,
Cuts and Wounds.*

GUTMANN & LESLIE GATES,

226 Mare Street, Hackney, London, N.E.

4 Mag. Cit. G.E. 4 Salines

TRY
**JAMES BOULTON
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Crayford Mills,
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4 Carlsbad Salts 4 Hygeia Salts

WHITE OILS.

Petroleum Jellies, White, Cream, Pale Yellow, Yellow, Orange, &c. White and Half White Oils, Odourless, Tasteless, Bloomless. Bloomless Oils, Light and Dark Yellow, Light and Dark Green, Red, &c.

Samples and quotations on application to the Sole Manufacturers:—

The STERN SONNEBORN OIL CO., Ltd.

"Royal London House," 16 Finsbury Square, London, E.C. & 108 Hope St., Glasgow.

Telegraphic Addresses: "CENTUMVIR LONDON."
Telephone Nos.: 3797 & 3798 LONDON WALL.

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HAIR
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YOU CAN GUARANTEE
Pétrole Hahn
FOR THE HAIR,

Manufactured by F. VIBERT, Lyons, France,
AS

**NON-INFLAMMABLE
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NON-EXPLOSIVE.**

Obtainable through all the Wholesale Houses.

Representatives: Wholesale only

The Anglo-Continental Trading Co.

104 HIGH HOLBORN, LONDON, W.C.

THE OATINE PREPARATIONS

show the retailer a living profit and much more, and if bought on window show terms make 50 per cent. If you are not buying on these terms you should commence now.



Write to-day for full particulars of our selling terms, or refer to our full-page advertisement in *The Chemist & Druggist*, October 9th, or look out for an announcement which will appear in the issue of November 20th.

THE OATINE CO.
430 Denman Street, S.E.

NEW STOCK, 1909, NOW READY FOR DELIVERY.

Shipkoff's Pure Otto of Rose.

The test of cheapness is *quality*—not *price*. Shipkoff's Otto of Rose is the cheapest, because it is the best Otto in the market. It is the *standard* brand—always pure and uniform and *one* quality only. Before placing your contract be sure to get Shipkoff's New Sample and Prices and try it.

ONCE TRIED, ALWAYS USED.

Highest awards at all Universal Expositions: Paris, 1889—Silver Medal. Chicago, 1893—First Diploma and Medal of Absolute Purity. Antwerp, 1894—The Cross and Diploma of Honour. Paris, 1900—Gold Medal. St. Louis, 1904—Grand Prix. Liege, 1905—Grand Prix. Milan, 1906—Grand Prix. London, 1907—Grand Prix.

**Shipkoff & Co., Distillers and Exporters of
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SIMPLE
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MOST
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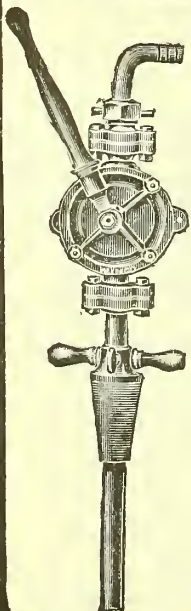
Made in a variety of patterns
suitable for all purposes.

**A VERY
PROFITABLE LINE
FOR CHEMISTS.**

Write for Illustrated Catalogue.

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CO., Ltd.,
121 OXFORD STREET, LONDON, W.**

"WINCO" OIL & SPIRIT BARREL PUMP



IN VARIOUS SIZES.

SIMPLE. RELIABLE.
DURABLE. CHEAP.

Best Workmanship.

In IRON or BRASS.

Can be used for any liquid,

WINE, SPIRITS,
:: OIL, ::
PETROLEUM, &c.

Ask for Illustrated Price List "C."

Once convince yourself how easy
and satisfactory it is to make your
own Soda Water by means of



"Prana" Sparklets,

and you will find your
sales increase by leaps
and bounds, for you will
be telling your customers
all about them.

To explain the use of Sparklets is to
sell them! The man who explains best
will sell most! And the man who
uses them at home is the man who will
explain best.

Use them at home!

Sole Makers: **Aerators, Limited,**
Upper Edmonton, London, N.

On the P.A.T.A. List.

FRAME-FOOD PREPARATIONS.

(Frame-Food, Racia Food (F.F. No. 1), Frame-Food
Jelly and Cocoa.)

**TRADE PRICE LOWERED
IN MAIN LINES**

FRAME-FOOD and FRAME-FOOD COCOA, the
Retail Prices remaining the same.

New Lines: "FAMILY" TINS.
NO STOCK! NO RISK! GOOD PROFIT!

Best Terms allowed on £2 Orders which are C.P.

ADVERTISING MATTER FREE.

Write for Particulars—

FRAME-FOOD CO., LTD.
SOUTHFIELDS, LONDON, S.W.

IT IS IMPERATIVE THAT CHEMISTS AND OTHERS REQUIRING

ESSENTIAL OILS

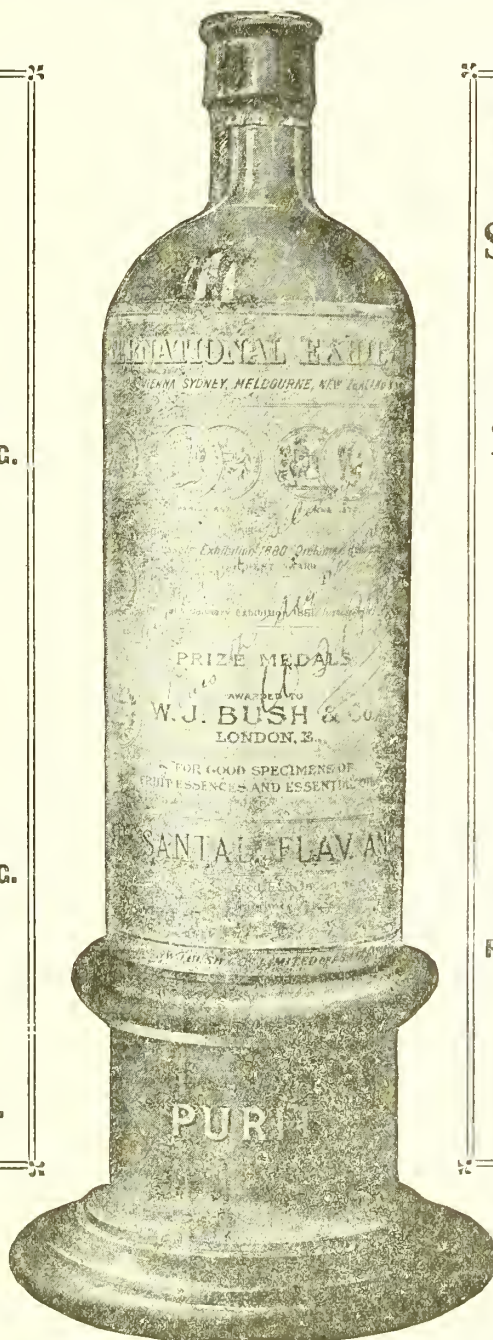
for Medicinal Purposes should employ Genuine and Finest Qualities only.

These can be obtained from W. J. BUSH & CO., LTD., who guarantee the following to be absolutely pure and to pass the tests of the British Pharmacopoeia, 1898.

Telephone Nos. 461 Dalston (4 lines).

Telegraphic Address: "TANGERINE LONDON."

OL. AMYGDALÆ ANG.
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FRUIT ESSENCES
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SOLUBLE ESSENCES

FLORAL OTTOS

Possessing the aroma
of the natural flowers
to a remarkable degree.

SYNTHETIC PERFUMES.

HARMLESS COLOURS.

CARAMELS.

FRENCH ESSENTIAL OILS.

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OILS.

OIL OF ORRIS CONCRETE.

FRENCH CREAM HEADINGS.

CONCENTRATED FRUIT
JUICES.

PRESERVATIVES.

W. J. BUSH & CO., LTD., Ash Grove, Hackney, LONDON, N.E.

HEAD OFFICES:

NOTICE OF ALTERATION IN PRICE.**VICHY**

(STATE SPRINGS.)

"Celestins," "Grande Grille," "Hôpital," &c.

We beg to inform the Trade that the above has been placed upon the **P.A.T.A.** List, and the prices and terms from 1st February, 1910, will be as under:—

7/9 per dozen large bottles, or **31/6** per case of 50.**5/9** " " small " " **23/-** " " " 50.**TERMS: Strictly net, Carriage Paid in the United Kingdom.**

The Minimum Selling Prices to the Public have been fixed at:

9d. per large bottle }
6½d. " small " } for any quantity, thus showing Retailers a good percentage of profit.

Showcards and Pamphlets forwarded Free, on Application to the Sole Agents:

INGRAM & ROYLE, Limited,
EAST PAUL'S WHARF, 26 Upper Thames St., LONDON, E.C.
 AND AT 19 SOUTH JOHN STREET, LIVERPOOL, AND BATH BRIDGE, BRISTOL.

25th January, 1910.

A. MILLAR & CO., LTD., DUBLIN

PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only.)

London Agent: **JAMES STIRTON, 23 ST. DUNSTAN'S HILL, E.C.**

Established
1855.

ROBINSON'S ORIGINAL

Excise Drawback on
Export Orders.

CONCENTRATED WATERS.

STANDARDISED TO B.P. 1898.

When diluted in the proportion of one part to forty parts of water at 60° temperature, they faithfully represent the Medicated Waters of the British Pharmacopœia. They are always of uniform strength, and will keep good any length of time in any climate.

Aqua Amygd. Amar. Conc. (U.S.) 4/- per lb.	Aqua Cassia Conc. ... 4/- per lb.	Aqua Menth. Virid. Conc. ... 4/- per lb.
" Anethi, Concent. ... 4/- "	" Flor Aurant. ... 8/6 "	" Pimentæ " ... 4/- "
" Anisi " ... 4/- "	" Sumbuci Conc. ... 8/6 "	" Pulegii " ... 4/- "
" Camphoræ " ... 4/- "	" Feniculi Conc. ... 4/- "	" Rosemarini " ... 4/- "
" Carui " ... 4/- "	" Menth. Pip. Conc. ... 4/- "	" Rosæ " ... 8/6 "
" Cinnam. Ver. Conc. ... 6/- "	" Ang. Conc. ... 6/- "	" Virgin " ... 10/6 "

The above may be had in ½-lb., ¼-lb., or 1-lb. Bottles and upwards, through most of the Wholesale Drug Houses.

Each Bottle has the Inventor's Protection Label over the cork, without which none are genuine.

SUPERIOR ORANGE WINE (Vin. Aurantii, B.P. 1898).

Samples of any of the above sent free on application from

B. ROBINSON & CO., LTD., Distillers and Brewers of British Wines. **CHURCH ST., PENDLETON, MANCHESTER.**

Telephone; 138 Pendleton

Cycle-
Carriers,



Trucks,
Baskets.

Any truck
can have
interior
fittings
to suit

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requirements.

All descriptions of BASKET WARE.

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W. T. ELLMORE & SON, Ltd., Thurmaston, Leicester.

Depots: 16 City Road, E.C.; 162 London Road, Manchester; 103 Howard St., Glasgow.

Telegraphic Address—"SACARINO LONDON."

Telephone Nos. 197 Bank and 1529 Central.

The Saccharin Corporation, Ltd.

Offices—165 Queen Victoria Street, London, E.C.

SACCHARIN,

Made in
England.

Highest Possible Strength.—550 times sweeter than pure Cane Sugar. This strength is recommended in preference to any other.

Ordinary Strength.—330 times sweeter than pure Cane Sugar.

Soluble.—500 and 300 times sweeter than pure Cane Sugar.

Crystals.—450 times sweeter than pure Cane Sugar.

Crystallose.—440 times sweeter than pure Cane Sugar.

N.B.—The Three last Strengths are Soluble in Cold Water.

THE SACCHARIN CORPORATION, LIMITED, are the owners of All Patents for the United Kingdom and Colonies, except India and Canada, for the commercial manufacture of Saccharin, and their Saccharin is the only Saccharin that can be purchased without RISK OF LEGAL PROCEEDINGS or the necessity of ANY INDEMNITY.

The Saccharin Corporation. Ltd.

Manufactory—8 and 9 Ewer Street, Southwark, London, S.E.

Brand's MEAT JUICE.

IN BOTTLES,

Price 28/- per dozen,

Less the usual discount.

BRAND & CO., LTD., MAYFAIR, W.

To H.M. The King, The Empress of Germany, &c.

BRAND & CO'S.
SPECIALTIES FOR INVALIDS.
CONCENTRATED
BEEF TEA, YEAL,
MUTTON & CHICKEN BROTHS;
TURTLE SOUP & JELLY, CALF'S FOOT,
JELLY, MEAT LOZENGES
ESSENCES OF BEEF, MUTTON, YEAL AND CHICKEN
SOLE ADDRESS,
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SAPONINE

Letters Patent in the United Kingdom, Germany, France, Austria, and U.S. America.

FOR THE PRODUCTION OF FROTH IN BEVERAGES.

The Best Material for Making GUM FROTH, LIQUID GUM, &c.*No Boiling or Filtering required. Absolutely Soluble. Better than Soap Bark and without its drawbacks.*

Stocks held by my Sole Agents for the United Kingdom:—Messrs. PETRI BROS., 39 Lime Street, London, E.C. For Australia and New Zealand:—Messrs. McDIARMID & CO., 248 Latrobe Street, Melbourne.

DR. RICHARD STHAMER, HAMBURG 8.The
Gold
Medal
Wine
TonicLondon,
1908.

DO Stock it? It means quick **YOU**
YOU sales and a steady profit if **DO**

SEND FOR LIST.

All Registered Chemists can sell Wincarnis with Quinine without a licence. Why not you?

Medical men in your district order it often, and there is a large public demand. [17]

By Special Appointment to the King & Queen of Spain.

COLEMAN & CO., LTD., 21 Wincarnis Works, NORWICH.

SAPONINE

(SOLUBLE),

MANUFACTURED BY

C. W. FIELD,

Cambrian Mills, LIVERPOOL.

Special Terms to Wholesalers and large Consumers.

Cheltenham Natural Aperient Water.

A natural Magnesia and Soda Sulphate Saline Water bottled by the Municipality from one of its Springs. AN ENGLISH WATER which as a saline aperient is equal in strength to and unexcelled by any of the German Waters.

Prices, pamphlets, sample bottles, &c.
on application to THE MANAGER,

Municipal Offices, Cheltenham.

Lines to Stock Now!!!

"OVALTINE," the Complete Food (On the P.A.T.A.)

Dr. Wander's Dry (Crystalline) Malt Extracts

Neurasthenia Pills, Kavasane Pills,
Tamarind Dragees, Coryza Ointment,
Neuralgia Ointment.

Customer's Name and Address printed on any quantity.

SEND FOR FULL LIST OF SPECIALITIES.

WE ARE EXHIBITING AT THE
Chemists' Exhibition,

Royal Horticultural Hall, **MAY 9-13, 1910.**

A. WANDER, Ph.D.

MANUFACTURING CHEMIST,

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TRADE MARK.
£300 IN PRIZES
given annually to
users of
E. J. F. & B.'s
prepara-
tions.

ANNATTO
Liquid and Cake.
The Strongest and Brightest.

CHEESE RENNET
Strength 12000.
Liquid, Powder and Tablets.

BUTTER COLOR
"Oleo" and "Sunbeam."

PRESERVATIVES
Powder and Liquid.
(Guaranteed Harmless.)

ESS. OF RENNET

JUNKET POWDER

LET
US SEND
YOU
QUOTATIONS
AND
SAMPLES.

Manufactory—**STEAM ANNATTO WORKS, HOXTON, LONDON, N.**

LOFTHOUSE & SALTMER, Wholesale and Export Drug Merchants, Manufacturing Chemists, HULL

Offer the Trade the following valuable P.A.T.A. Protected lines, bearing a very large Protected Retail Profit, which sell freely and are well known and valued by the Public in many parts of the Country.


	PROTECTED RETAIL PRICE.	DOZEN.		PROTECTED RETAIL PRICE.	DOZEN.
LOSALL'S SALT (well advertised), tins ...	6d. ...	3/8 net.	LOSALL'S ASTHMA REMEDY. Very effective. Large profit ...	1/- ...	7/6 net.
" " " bottles ...	1/- ...	7/- ..	MALTED FOOD. Usual 1/- size, lever lid tins. Buyer's name and address printed free on 3 dozens. Special design label, name and address, on gross orders if desired ...	— ...	4/6 ..
" in cartons ...	1/6 ...	10/6 ..	LOSALL'S BALL ROOM FLOOR POLISH. Sells well. Big profit ...	1/- ...	7/- ..
LOSALL'S MILK FOOD , oblong tins. 1/- size. Ideal Food for children and adults ...	3 3/4 ...	5/3 ..			
FINEST HYGIENIC FIRST MILK FOOD "Crown Brand," specially adapted for infants from birth to 3 or 4 months, tins 1/3 ...	1/- ...	7/8 ..			

Chemists taking up the above really valuable, large profit-yielding lines, will find them an important adjunct to their business.

London Agents: **F. NEWBERRY & SONS.**

If you want close up-to-date Quotations for superior and approved Counter Specialities, and for Pure Drugs, Chemicals or Pharmaceutical Preparations, don't fail to write to

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SUMMER TERM
APRIL 4

325 KENNINGTON ROAD, S.E.**GLASGOW SCHOOL of PHARMACY,****180 WEST REGENT STREET, GLASGOW.****Principal: JOHN LOTHIAN,**

Pharmaceutical Chemist, Medallist of the Pharmaceutical Society, &c.

From July, 1909, to January, 1910, the following Students were successful in the Minor Examination:

R. M. Blair, New Zealand.	William Mitchell, Glasgow.
Archibald Brownlie, Rothesay.	Lionel A. Milne, Peterhead.
Charles Cochran, Kirkintilloch.	Catherine Nicholas, Shetland.
Herbert Gartside, Westmoreland.	John Orr, East Kilbride.
John Gray, Grangemouth.	A. B. Paterson, Glasgow.
George Heughan Dalbeattie.	Gilbert Spears, Glasgow.
Lewis Harper, Elgin.	Alex. Tweedily, Thornhill.
John King, Wishaw.	Thomas Taylor, Glasgow.
John Logan, Beith.	

NEXT QUARTER BEGINS APRIL 5th, 1910.*Send for Prospectus.***BIRMINGHAM and MIDLAND****College of Chemistry, Pharmacy and Botany,****45 Newhall Street, BIRMINGHAM.****Principal: G. L. SCOTT, Pharmaceutical Chemist.***Member of the Pharmaceutical Society.***Next term will begin on April 4.**

A revision class for the April Examination began on February 16.

*Full particulars on application.***"Oni heuir ni fedir."****THE LIVERPOOL SCHOOL OF PHARMACY**
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Mr. EDMUND CARTMELL	Kirkoswald, R.S.O.
" W. W. COWAP	Tarporley.
" A. E. HAMNETT	Waterloo.
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Assistants: B. M. BRANDER and T. O. BROADBENT.

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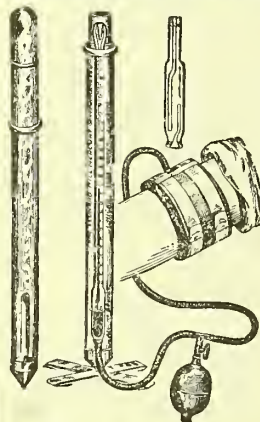
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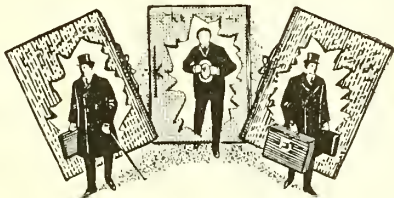
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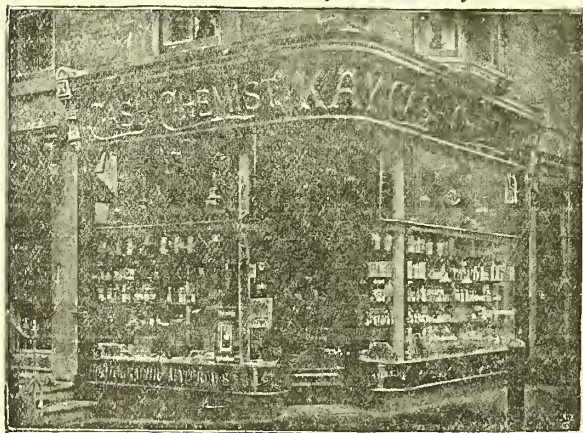
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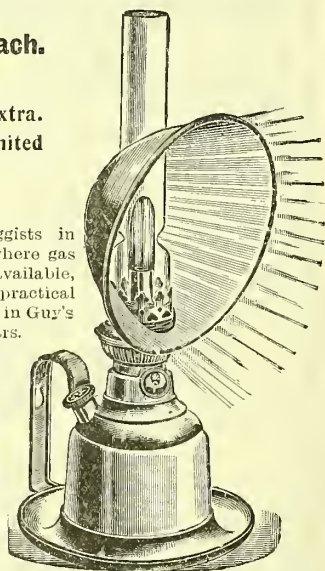
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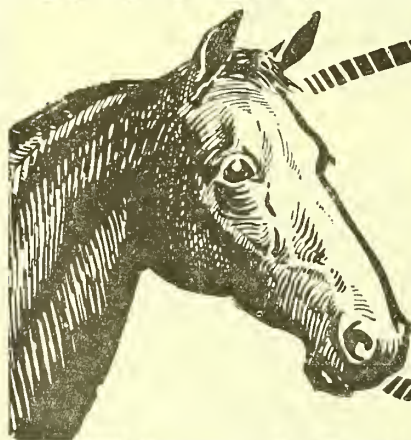
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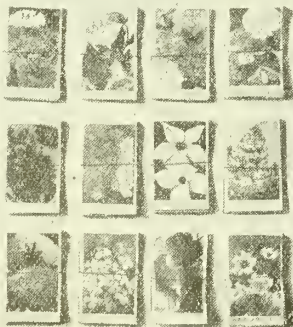
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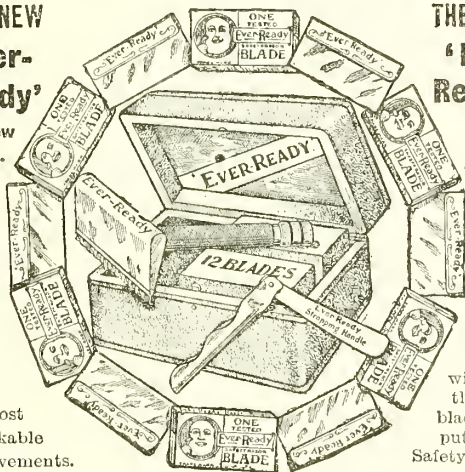
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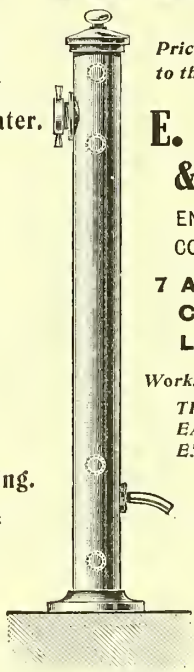
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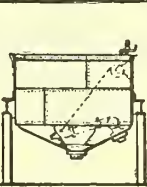


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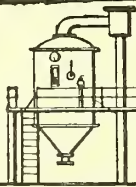
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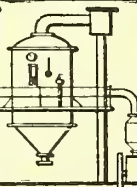
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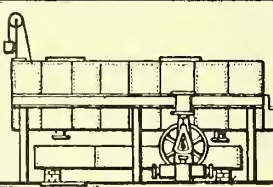
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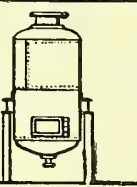
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EXPORT BUSINESS.

The issue of THE CHEMIST AND DRUGGIST to be published on March 12 will be the annual Merchant Shippers' Number, and we offer in it to advertisers an opportunity not otherwise available of placing their goods before a class of buyers who are not addressed through the customary channels of advertising. Merchant shippers receive and execute indents for buyers abroad. They have many varieties of goods to buy, and what we aim at in our Export Merchant Shippers' Issue is to place in their hands once a year a number of the *C. & D.* which they may refer to during the year when they are

Filling Indents.

The importance to business-houses of having announcements in that issue is apparent; it costs them no more than an advertisement in, say, this number of the *C. & D.* We give the circulation to export merchant shippers in addition to our regular weekly circulation, and without extra charge. Immediate application should be made for space to the Publisher, *C. & D.*, 42 Cannon Street, London, E.C.

Summary of this Issue.

The more notable items only are dealt with.

Articles and Communications.

Further particulars about polonium are given on p. 309, the notes framing a picture of Mme. Curie and her daughter.

On Budget days in future bonded warehouses are not to be kept open longer than the usual closing one. We tell why (p. 327).

The bromoil photographic printing process was described to the Chemists' Assistants' Association by Mr. G. T. Gale, and an abstract of his communication is given on p. 331.

Mr. J. R. Young spoke at Stoke last week in regard to the word "pharmacy." We review the situation as it was when Mr. Young spoke at the same place a year ago and as it is now (p. 326).

Owing to exceptional pressure on our space this week the observations of X-rayser II. are confined to a column on two subjects—medicine-stamping anomalies and chemical research (p. 325).

Dr. Leonard Dobbin reports that the last "salt" was a mixture of sodium carbonate, mercuric chloride, and potassium metarsenite. Messrs. W. J. Rankin, jun., and G. Harding take the prizes (p. 308).

A new Italian Pharmacopoeia has been published, and we comment upon it, showing how in certain directions tests are adapted to the requirements of retail pharmacists rather than to please analytical specialists (p. 327).

Besides quoting new monographs on essential oils from the Italian Pharmacopoeia (p. 328), we print on p. 341 communications from Messrs. Evans Sons Lescher & Webb and Mr. W. Naumann, in which they criticise the standards proposed by Messrs. Hill and Umney.

The adulteration of olive oil with arachis oil was referred to several times in our last volume. We now publish a series of notes by Mr. C. A. Hackman, F.I.C., in which analysis of such adulterated oils is discussed—most opportunely, in view of the legal case reported in this issue. Mr. Hackman's paper begins on p. 329.

The Week's News.

The Port of London rates inquiry was opened by Viscount St. Aldwyn on Thursday, and is reported on p. 336.

The strange conduct of a Parisian pharmacien towards his wife, of whom he was inordinately jealous, is told by our French correspondent on p. 313.

Chemists throughout the country are having an exceptionally good time at present, if we may judge from the numerous festivities reported in this issue, pp. 333-5.

Mr. C. Noel Layman, of London, died suddenly of heart failure last Saturday. We give brief particulars of his career and of the late Mr. R. W. Johnson's (p. 319).

Our Parliamentary representative gathers that the present Parliament will last until the early summer. His notes show that some non-political business is being pushed forward (p. 336).

North-East Lancashire chemists are angry with the Pharmaceutical Council about the "Pharmacy" matter, and indulged in some plain speaking at a meeting on Tuesday, reported on p. 332.

Sir Edward Thorpe delivered a memorial lecture to the Chemical Society last week on Julius Thomsen, the Danish chemist, technologist, and publicist. Our report of it is in the Coloured Supplement.

The evening meeting of the Pharmaceutical Society in Edinburgh last week was practical and profitable. The subjects included sweet orange flavours, glycerin as a preservative of sulphurous acid, and Pusch's test for tartaric acid in citric acid (p. 323).

The Legal Reports are numerous and interesting this week, and include one in the High Court against a well-known London wholesaler, which he won. The Sale of Food and Drugs Acts cases about olive oil and cod-liver oil are also of importance to all buyers (pp. 315 to 317).

Trade and Market Matters.

The features in the chemical and drug markets include a further advance in opium, and a very firm tone in Norwegian cod-liver oil. Lithia carbonate, lemongrass oil, saffron, and indiarubber are higher. Quicksilver, oxalic acid, Japan wax, and copper sulphate are all cheaper (p. 337).

Corner for Students.

Conducted by Leonard Dobbin, Ph.D

All communications for this section should be addressed thus "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C."

Report on February Analytical Exercise.

THE powder distributed to students on January 26 contained eight parts by weight of dry sodium carbonate, one part of mercuric chloride, and one part of potassium metarsenite. The calculated composition of such a mixture is:

Hg	...	...	...	...	7.4
K	...	...	...	...	2.7
Na	...	...	...	...	34.8
Cl	...	...	...	...	2.6
AsO ₂	...	...	...	...	7.3
CO ₂	...	...	...	...	45.2

100.0

The powder also contained, as impurities, distinct traces of calcium and magnesium, and there was also a small proportion of combined or hygroscopic water not indicated in the above percentage composition.

Samples of the powder were distributed to forty-two students, and twenty reports were sent in for examination. All of our correspondents were successful in detecting the presence of sodium. The failures in the detection of the other constituents were: (a) Metallic radicals: Mercury, 6; potassium 12. (b) Acid radicals: Hydrochloric, 2; arsenious, 4; carbonic, 1.

In this exercise, preliminary tests again gave good information, and a few students entered upon the systematic analysis with the knowledge that sodium in large quantity, mercury, and a carbonate were present, and with some evidence of the presence of potassium, a chloride and an arsenium compound. Notwithstanding this, however, difficulties of a somewhat unusual kind were encountered at the threshold of the systematic analysis and also later, and all of these were surmounted only in comparatively few cases. As a result, the marks attained are, on the whole, decidedly lower this month than usual.

The powder was colourless when its ingredients were first mixed, but it gradually became brownish and was reported by a few students as dark brown. When it was mixed with water a black insoluble substance made its appearance, which some reported to be insoluble, while others reported it to be soluble in hydrochloric acid. In our own analysis we experienced little difficulty in obtaining a perfectly clear solution on boiling the powder for a few minutes with a moderate quantity of dilute hydrochloric acid. The darkening of the original powder and the formation of the black substance just referred to, were due to the partial reduction, by the potassium arsenite, of the mercuric chloride with the formation of an arsenate and a mercurous compound, the latter of these, in presence of the alkaline solution of sodium carbonate, yielding a black substance resembling that produced in the preparation of *Lotio Hydrarg. Nig.* Two or three students took this black substance to be mercuric sulphide and were thereby led to report the presence of a sulphide. In those cases where the original powder was treated at once with dilute hydrochloric acid, mercurous chloride in small quantity was at first present in suspension in the liquid, but this slowly dissolved on boiling. The slight solubility of both mercurous and silver chlorides in moderately concentrated boiling hydrochloric acid should not be overlooked by students.

When hydrogen sulphide was passed through the original hydrochloric acid solution, it was important that the arsenate present (apparently in considerably varying quantity in different cases) should be completely reduced, in hot solution, to arsenite, and the arsenium precipitated as arsenious sulphide, since, otherwise, a reaction resembling that of a phosphate but really due to the arsenate was obtained subsequently with ammonium molybdate. Of those correspondents who recognised the presence of an arsenate, three reported the arsenium to be present in this form alone. On the other hand, eight simply reported arsenium and did not make any attempt to ascertain whether it was present as arsenite or as arsenate.

Of the twelve students who failed to detect potassium, the majority employed Carnot's test. When a potassium salt is mixed, as in the present instance, with a very greatly preponderating quantity of a sodium salt, special precautions are sometimes needful in applying Carnot's test. Thus, on adding the solution to be tested to the prepared Carnot mixture, instead of obtaining the characteristic yellow precipitate, a white turbidity sometimes results, due simply to the separation of sodium bismuth thiosulphate. On very carefully adding water, drop by drop and mixing thoroughly after each drop, this turbidity gradually diminishes, and before it has entirely disappeared the flocculent yellow potassium bismuth thiosulphate begins to make its appearance. We recommend our correspondents to make some experiments on the effects of adding mixtures in varying proportions of potassium chloride and sodium chloride solutions to the mixed Carnot reagent, and then very carefully adding drops of water to any of the resulting mixtures in which a white precipitate is produced.

Having applied the turmeric paper test for a borate, a few students reported a trace to be present. As none was really present, the reaction observed may have been due to the turmeric paper itself. We have met with commercial samples of turmeric paper which evidently contained traces of a borate, since they showed a distinct boric-acid reaction when simply moistened with dilute hydrochloric acid and dried. Students should be on their guard respecting such papers and should test those they employ by means of blank experiments before using them in analyses.

The presence of traces of an ammonium compound and of iron was reported in one or two cases, but we were unable to find any trace of the former or to obtain more than the faintest indication of the latter.

PRIZES.

The First Prize for the best analysis has been awarded to W. J. RANKIN, Jun., c/o R. Morrow, 25 Corn Market, Belfast.

The Second Prize has been awarded to

GEORGE HARDING, 5 Dacre Street, Morpeth.

First Prize.—Any scientific book that is published at price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

1. Correspondents who are unqualified:

W. J. Rankin (first prize)	86	R. C. P.	...	...	75
George Harding (second prize)	...	Thermos	...	...	74
Rob Roy (Newcastle)	...	Malvaline	...	...	69
Neptunia	...	Dido	...	...	66
Validol	...	Ariadne	...	...	64
A. F.	...	Preservitas	...	...	57
	...	Rob Roy (Fife)	...	...	40

2. Correspondents who are qualified:

Boiling Point	...	93	Nitrox	...	...	53
Cobalt	...	71	Radium	...	...	81
Drumsheugh	...	81	Xenon	...	...	71
Labore	...	67				

TO CORRESPONDENTS.

W. J. RANKIN, JUN.—The ammonium-molybdate reaction which you attributed to a phosphate must have been due to the presence of some still unreduced arsenate, or the precipitate may simply have consisted of molybdic anhydride.

ROB ROY (Newcastle-on-Tyne).—Your recognition of arsenium in the systematic testing for metallic radicals is all in order, but your failure to detect an arsenite in the sodium-carbonate extract for acid radicals is difficult to explain.

VALIDOL.—Careful tests for "sulphur in any form" gave us negative results. May the sulphate reaction which you noted have been due to the presence of traces of a sulphate in the sodium carbonate you employed?

A. F.—We believe the odour which you took for that of sulphur dioxide was merely that of hydrochloric acid, evolved when you warmed the powder with solution of hydrochloric acid. We have no ground for remark as to want of clearness in your report this month; the larger size of sheets used is in itself a long step in the direction of aiding lucidity.

R. C. P.—We have not been able to gather from your report why you concluded that mercury was present only as a mercurous compound. You describe, no doubt inadvertently, the addition of silver chloride or silver nitrate in testing for acid radicals; we do not suppose you regard it as a matter of indifference which of the two is employed.

THERMOS.—It is unfortunate you had not more time to devote to the analysis and report. Your most serious analytical errors were your failure to detect mercury and your reporting arsenium present as arsenate only. The general remarks should assist you in clearing up some of the difficulties which confronted you in the course of the analysis.

MALVALINE.—Mercuric sulphide was the dark substance which led you to suspect that tin was present, but we cannot so readily explain how you got apparent confirmation of the presence of tin.

ARIADNE.—Since the hydrogen sulphide precipitate was yellow, instead of nearly black, when you removed it by filtration, it is plain that you had not passed hydrogen sulphide until the precipitation it was capable of effecting had been completed. The precipitate formed on the subsequent addition of ammonium hydrosulphide, which you attributed to nickel, consisted of mercuric sulphide.

PRESERVITAS.—The brown residue from the digestion with ammonium sesquicarbonate in the arsenium group most likely consisted of incompletely dissolved arsenious sulphide mixed with some mercuric sulphide. Sodium sulphide (which you employed to dissolve out arsenium-group sulphides) has a distinct solvent effect on mercuric sulphide, and for this reason it is not so commonly used for this purpose as ammonium hydrosulphide.

ROB ROY (Fife).—You describe the hydrogen-sulphide precipitate as insoluble in ammonium sulphide—probably because it did not dissolve completely—whereas about one-half of it dissolved. Non-evolution of sulphur dioxide on warming with dilute sulphuric acid indicated the absence of a thio-sulphate, as you report, but it also indicated the absence of a sulphite which you report present.

BOILING POINT.—The trace of sulphur you detected may have been present in the charcoal you used.

DRUMSHEUGH.—When heated in a narrow tube (whether alone or with the addition of more sodium carbonate), the powder gave a very distinct sublimate, which you ought not to have overlooked.

LABORE.—You obtained a black precipitate with ammonium hydrosulphide, which you found later to consist of zinc sulphide. Picric acid is not at all a delicate test for potassium. Read also the replies to "Ariadne" and to "Drumsheugh."

XENON.—Note that the solubility in ammonia of a white precipitate formed on the addition of silver nitrate to a solution acidified with nitric acid does not prove the absence of a cyanide. In our own practice we usually rely on the turneric paper-test for boric acid—but see the general remarks. The presence of an arsenate does not interfere with this test. You have no doubt found—as others have found before you—that you learn at least as much from your failures in qualitative analysis as from your successes.

PROGRESS OF THE TOURNAMENT.

The exercise reported upon in the foregoing is the fourth of the current tournament series, and we subjoin the pseudonyms and the aggregate marks attained by the twelve competitors who occupy the higher positions on the register. As on several former occasions, the scores of those nearest the top are very close to each other, so that no very safe forecast of the final result is possible. The closeness of the competition may serve as a stimulus to those holding the highest positions to a special effort to maintain them, and to those who are well up in the list to endeavour to make up on those who are above them.

Validol	...	...	353	A. F.	...	...	312
Boiling Point	...	...	350	Dido	...	...	297
Rob Roy (Newcastle)	...	...	345	Cobalt	...	...	293
Litmus	...	...	344	R. C. P.	...	...	283
Neptunia	...	...	337	Xenon	...	...	278
Radium	...	...	318	Labore	...	...	276

Exercises in Practical Chemistry.

We repeat the following from the Coloured Supplement of February 19. No "salt" is being sent out this month, but all students may do the following work and send in reports for the book prizes to be awarded in March:—

First prepare accurately the following solutions, placing each in a separate bottle and labelling each with the name of the dissolved substance and the appropriate distinguishing letter:

A. 2 grams cupric sulphate (cryst.), dissolved in 40 c.c. distilled water.

B. 2 grams lead acetate (cryst.), dissolved in 40 c.c. distilled water.

C. 2 grams potassium bromide and 2 grams magnesium sulphate, dissolved in 40 c.c. distilled water.

D. 10 grams sodium carbonate (dry), dissolved in 100 c.c. distilled water.

E. $\frac{1}{2}$ gram silver nitrate, dissolved in 25 c.c. distilled water.

F. 5 c.c. saturated solution of ammonia, mixed with 100 c.c. distilled water.

Exercise I.

In separate vessels place 10 c.c. A and 10 c.c. B; to each add 10 c.c. D, and boil both mixtures for five minutes. Filter; acidify each filtrate with dilute hydrochloric acid, and add solution of hydrogen sulphide to both.

Exercise II.

Mix 10 c.c. C with 10 c.c. D; boil for five minutes; filter. Divide the filtrate into two parts:

(a) Add 5 drops of chlorine-water.

(b) Acidify with dilute hydrochloric acid, and add 5 drops of chlorine-water.

Exercise III.

Mix thoroughly 10 c.c. C with 5 c.c. E; filter; wash twice with cold distilled water. Pour on the precipitate 20 c.c. F, returning the filtrate to the filter four successive times. Acidify the filtrate with dilute nitric acid.

In the case of each exercise:

(a) Describe the phenomena observed.

(b) State the chemistry of the changes which take place.

(c) Mention any bearings of the observed phenomena on qualitative analysis.

Students' reports will be received up to Thursday, March 3.

Polonium.

THE isolation of polonium by Mme. Curie follows a long time after the discovery of it by her. The "British Medical Journal" tells about her work on pitchblende, the radio-activity of which she ascertained to be—due to the presence of two new elements mixed in minute quantities with bismuth and barium. To that associated with bismuth Mme. Curie, out of regard to her native country, gave the name polonium; to the other, discovered shortly afterwards in association with barium, the name radium. The latter metal is derived from uranium by a process of atomic disintegration, attended at certain of its stages by radio-active phenomena; the radio-activity of radium itself is likewise attended by atomic disintegration. The atomic weight of radium is 226; after the alpha rays, which are believed to consist of atoms of helium, have been expelled, the "emanation" left has an atomic weight of 222. This emanation yields radium A (218), then radium B, and radium C (214); the changes from radium A to C are rapid—a matter of hours. Radium C gives off beta and gamma rays, and also alpha rays (helium), changing into radium D (210); its period of change is long, to be measured in years; it yields radium E, and E, and the latter changes into radium F, which is polonium. These last changes occur in a few days. In chemical characters polonium resembles bismuth. The radio-activity of polonium is entirely due to the expulsion of alpha rays, and this would reduce the atomic weight to 206. Its radio-activity is more intense than that of radium; it cracked a quartz vase in a short time, and decomposed organic bodies with extreme rapidity. It wasted very rapidly, losing 50 per cent. of its weight in 140 days. It emitted helium, as was anticipated; but the exact nature of the residue has not been determined, though it is believed to be lead.

The latter observations were communicated to the Academy of Sciences a fortnight ago. Mme. Curie continues not only her work in research but as a lecturer. She and her husband were not rich, and it is interesting to observe that her devotion to their daughter is not less than her love for science.



MME. CURIE AND HER DAUGHTER.

English and Welsh News.

When sending Newspapers containing Trade news to the Editor please mark the items.

Brevities.

Plans have been passed by the Barking Urban District Council for the erection of a laboratory at Creeksmouth for the Lawes Chemical Co., Ltd.

A slight fire occurred on February 21 at the premises of Messrs. Newell & Co., 1 Ironmonger Lane, Old Street, E.C., but it has not interfered with business.

A room at the rear of the shop of Messrs. Jeeves & Son, chemists and druggists, 88 St. George's Road, Brighton, was destroyed by fire on February 22. The damage is covered by insurance.

At the inquest held at Sherburn on February 19 regarding the death of Mr. Thomas W. Leake, pharmaceutical chemist, the jury's verdict was "Hanged himself, being of unsound mind."

At the annual meeting of the Optical Society, held at 20 Hanover Square, London, W., on February 21, Mr. S. D. Chalmers was appointed President for the ensuing year. Mr. J. H. Sutcliffe, the retiring President, gave an address, in which he described a new practical method of measuring a varying corneal curve.

Sixteen members of the North Kent Chemists Association visited the works of Messrs. Idris & Co., Ltd., Camden Town, on Wednesday afternoon, February 23. The visit proved very interesting and instructive, and at the conclusion of their tour Mr. Goldthorpe (President) proposed a vote of thanks, which Mr. Wing (Secretary), Woolwich, seconded. Mr. T. H. W. Idris and Mr. Bishop replied.

The Board of Customs and Excise have provided forms on which doctors may apply for a rebate of the duty on petrol, and copies may be obtained from local officers of Customs and Excise. The form provides for only half the duty, but owing to representations by the Motor Union and the British Medical Association, the whole duty is to be refunded on petrol received by doctors before December 4, 1909, if application is made for the whole amount.

At Lincoln on February 17, Chas. H. Yates, apprentice, was remanded on a charge of stealing from a safe 20*l.* in money and 15*l.* 16*s.* 4*d.* in cheques and postal orders, the property of his employer, Mr. E. Rowlett Dixon, chemist and druggist, 312 High Street, Lincoln. Two other lads, whom the police had hopes of arresting, were also concerned in the theft, and J. A. Cooper was on February 22 remanded on a charge of being concerned with Yates. He admitted the offence.

At a meeting convened by the Mayor of Yarmouth in order to form two voluntary aid detachments for the local Territorial force, Mr. A. R. Davies, in offering his services as a pharmacist, said that all his brother chemists had expressed willingness to serve in a similar capacity. He hoped that only qualified men would be allowed to act in this particular work. When the meeting closed the requisite number of names had been obtained, and Mr. Davies presented a list of quite a number of ladies whom he had induced to enlist in this service.

Tropical Hygiene.

The second lecture by Professor W. J. Simpson at the London Chamber of Commerce on February 22 dealt with malaria and its prevention. The essential requirements in a malarious district were given as follows: (1) A good mosquito net; (2) residential quarters away from Native dwellings; (3) wire-net screening for offices if used after sundown, and for residential quarters; (4) a supply of quinine. No European should omit to make a weekly inspection of his bungalow and surrounding premises to ascertain that they are kept clean and that nothing is left lying about which after a shower of rain will retain the smallest quantity of water and thus become breeding-places for mosquitos, while water stored in tanks should have a small quantity of kerosene oil poured on to it in order to destroy any larvae. In very malarious countries a daily dose of 5 grains of quinine is a powerful protection against infection.

Auction Sales.

On February 15 Mr. Stevens, at his rooms in King Street, Covent Garden, disposed of a pair of Old Sicilian drug jars for 1*l.* A very rare "Mascotte" or fetish figure, which had been "in the possession of the natives of Darnley Island for generations," realised 1*l.* 17*s.* 6*d.*; a West African fetish, with horns and feathers, "used by Su Su medicine man," 15*s.*

On February 22 and 23 the remaining portion of the extensive and valuable collection of British Lepidoptera formed by the late Mr. J. A. Clark, chemist and druggist, were sold by Mr. Stevens at his rooms. Many rare species, with the type specimens of Mr. Clark's monograph, "Pepona Cristana Fab. and its aberrations," which appeared in Vol. 13 of "The Entomological Record," were included. The proceeds of the two days' sale are expected to realise about 450*l.* The previous sales, reported in the *C. & D.*, December 11, 1909, yielded 900*l.* One of Mr. Clark's handsome cabinets, with sixty drawers of beautiful workmanship, in first-class condition, was sold for 41*l.*

The remainder of Messrs. Lynch & Co.'s stock of surgical instruments and druggists' sundries were sold by Mr. Bowen, at Hare Court, E.C., on February 17, as briefly noticed in our issue of February 19. Saleable lines realised fair prices: 1½ gross of cotton suspensory bandages, No. 7, sold for 2*l.* 12*s.*, 13½ dozen silk ditto, for 2*l.* 4*s.* Four pieces of "netting," about 100 yards, "stock-book price" 6*l.*, fetched 4*l.* 8*s.*; 24½ gross of sachets went for 32*s.*, and 2 gross of tooth-brushes were not dear at 62*s.*; 1½ dozen of hypodermic syringes, "various," were disposed of for 2*l.* 4*s.*, and 3½ dozen "clinicals" and 6½ dozen clinical cases for 2*l.* 6*s.* As was to be expected, competition was not keen for some of the out-of-the-way lots, but we understand that with few exceptions all the lots changed hands.

Messrs. Puttick & Simpson, at their rooms in Leicester Square, have recently disposed of a collection of curious portraits of notable characters, including a series of prints of "Quacks, Empirics, and Eccentrics," among them being portraits of James Morrison, "the Hygiest," St. John Long, "as he appeared at his defence in the Old Bailey, February 19, 1831," a fancy portrait of Sanctorius (*sic*), "in his balance," Lord Barrymore, "the stroker," and Master Van Butchell, pupil of Dr. Hunter. An advertisement of Van Butchell was also included; it ran:

By the GRACE of GOD, we cure toothache in twenty minutes, without drawing it; likewise bad ruptures, very speedily, with fit bandages that do not torture.

Master Van Butchell, surgeon for the teeth for more than thirty years.

They that seek shall find.

Sale of Food and Drugs Acts.

The Lambeth analyst (Dr. John Muter, F.R.S.E.) reports that all the following samples proved on examination to be genuine: Mustard 4, pepper 3, olive oil 1, vinegar 1, chocolate powder 1, and salad oil 1.

The Wandsworth analyst (Dr. J. Muter) reports that of two samples of arrowroot examined, one was found to contain 90 parts of tapioca. Proceedings are to be taken against the vendor.

Wine and Spirit Licences.

At the Epsom Licensing Sessions the application of Mr. Wilfrid Charles Phillips, pharmaceutical chemist, Tadworth, for a medicated-wine licence was granted.

At the Pembroke Licensing Sessions, Mr. F. S. Reed objected, on behalf of the Pembroke Dock Licensed Victuallers' Association, to the renewal of the licences held by Mr. A. L. Williams, chemist, at the "Beehive," Commercial Road, and the "Phoenix" premises, Ruth Street. The objections raised were that the premises did not comply with the requirements respecting accommodation, and that children were permitted to enter and remain on the premises, also that there was only one entrance to each of the houses. The objectors were aware that there are no licensed houses in the town better conducted than those of Mr. Williams, who is the only professional innkeeper in the place. The other grounds for objection were insufficient police supervision and lack of accommodation for billeting soldiers. However, the majority of the licensed houses in Pembroke would not comply with the latter re-

quirement. Yet another objection was that one person held two licences in the same town. Much secret drinking is attributable to chemists' and grocers' shops with off-licences, and persons who would not be seen going into a public-house would patronise a highly-respected chemist. Mr. McCulloch (President of the Licensed Victuallers' Association), in his evidence, said that no complaint was made that the liquor traffic formed the main portion of the business, but that the Association objected to "a licensed business and a chemist's business being all in one." Mr. R. Lawless, on behalf of Mr. Williams, said that one of the houses had been in the hands of the applicant or his predecessors for eighty-five years, and the other for fifty-five years, without a single complaint. The Magistrates had carefully examined the premises on more than one occasion. No drink was consumed on the premises, and the licence might be regarded as merely an off-licence. The police, justices, and temperance party had raised no objections. The Bench unanimously decided to renew the licences.

Contracts.

Chiswick District Council.—Messrs. A. C. Young & Co., for disinfectants.

West Ham Town Council.—Allen & Hanburys, Ltd., for the year's supply of druggists' sundries to the hospital.

Leyton Urban Council.—Messrs. Burgoyne, Burdidges, & Co., the Essex Pure Drug Stores, and Mr. T. H. Seed, for drugs and sundries.

Lambeth Borough Council.—Dussek Bros. & Co., Ltd., for carbolic acid, and Snowdon, Sons & Co., Ltd., for carbolic powder during the ensuing year.

Plackburn Union.—Messrs. Oldfield, Pattinson & Co., Manchester, for one year's supply of drugs, and Cuxson, Gerrard & Co., Ltd., Birmingham, for dressings.

Admiralty.—Price's Patent Candle Co., Ltd., for glycerin; Bates Bros., Cuxson, Gerrard & Co., Ltd., Darton Gibbs & Co., Benjamin Lees, Ltd., Manchester, Liverpool Lint Co., J. F. Macfarlan & Co., Robinson & Sons, Ltd., W. G. Taylor, and Vernon & Co., Ltd., Preston, for surgical dressings.

Maylebone Borough Council.—For annual supplies to the Public Health Department: A. C. Young & Co., for carbolic-acid powder at 2*l.* 9*s.* 3*d.* per ton; Burt, Boulton & Haywood, for carbolic acid at 10*3**d.* per gal.; Chemicals & Saccharin, Ltd., for formalin tablets at 2*l.* 1*s.* per 20 lb.; Exors. of W. Sharratt, for kerosene at 1*s.* 4*d.* per gal.; A. Boake, Roberts & Co., Ltd., for sulphur dioxide in 20-oz. tins at 12*s.* per doz., in 70-oz. tins at 1*l.* 16*s.* per doz., less 7½ per cent. discount.

Gale Havoc.

An exceptionally strong gale swept the British Isles on Saturday and Sunday last and did much damage, even to pharmacists, as the following paragraphs show:

At Burnley an electric lamp outside Mr. Hartley's shop was blown down, and a large signboard was removed by the gale from the premises of Messrs. Francis & Co., Manchester Road.

Messrs. Boots' shop in Gooch Street, Birmingham, suffered considerable damage by the gale on Sunday last. The upper part of one gable end was blown in.

The sun-blind of Mr. F. A. Goodwin's establishment at 79 Mutley Plain, Plymouth, was dislodged. It smashed the plate-glass window and did damage to the contents, as well as fittings.

On February 20 five large corrugated-iron roofing-sheets were blown from the top of the premises of Messrs. Oppenheimer, Sons & Co., Ltd., 179 Queen Victoria Street, into the roadway, to the imminent danger of a taxicab, which, however, escaped injury.

At Manns' Drug-stores, High Street, Clapham, the side facing the south-west was struck, and a plate-glass window some 14 ft. by 12 ft. was driven in bodily. The wind force expended itself by driving out a front window of similar dimensions into the High Street. The contents were destroyed or damaged. By Wednesday, February 23, the windows were renewed; the fittings are being replaced, and business is now carried on as usual.

Public Dispensing and Qualified Dispensers.

A lecture on the poor-law medical relief section of the report of the Royal Commission was given in Sheffield on February 21 by Dr. John McVail, the chief medical in-

vestigator employed by the Commission. One of the written questions handed up at the close of the lecture was "Are you in favour of all public dispensing, as far as possible, being done by a qualified dispenser, other than the medical prescriber, in order that extra safety may be ensured and the medical officer may have a wider range of drugs?" In reply the lecturer said that in his opinion every institution ought to have a dispenser—a qualified dispenser—and through him drugs should be supplied to patients at wholesale prices, wherever they could afford to pay. With regard to his own experience in Scotland, he said the question was sometimes the cause of trouble between doctors and druggists. His own view was that the doctors should do the prescribing and the chemists the dispensing; but doctors had been known to dispense and chemists to prescribe.

Halley's Comet.

Professor H. H. Turner, Savilian Professor of Astronomy in the University of Oxford, discoursed on "Halley's Comet" at the Royal Institution, Albemarle Street, London, W., on February 18. The lecture was historical and described the methods of calculating the time of the appearance of the comet. Messrs. Cowell and Crommelin, of the Greenwich Observatory, have carried out the calculations and fixed May 18 as the date when the earth passes through the tail of the comet. The first photograph of the comet was taken at Helwan Observatory in Egypt on August 24, 1909. An interesting part of the lecture was a reference to the composition of the tail of the comet. The spectrum shows characteristic lines of an element of the nature of hydrogen, and investigations on these lines will be conducted during the year. It was suggested that the air surrounding the earth on May 18 should be specially examined for the new element. Those who wish to can, by bottling some of the air on the night of May 18, hand down to their successors a sample of Halley's comet.

Birmingham Notes.

Mr. Wilfred Southall took the chair at the meeting at the Hygienic Institute in Birmingham last week.

A beautiful stained-glass window has been placed in St. Oswald's, Small Heath, to the memory of the late Mr. A. L. Hull, who was well known in the drysaltery business and a prominent worker in the church.

Messrs. Needham's shop-window in Bristol Street has a number of prizes arranged tastefully which are to be given away in a guessing competition to the winners who can tell the nearest weight of the contents of two bottles, which contain a white and calamine-like powder respectively.

Messrs. Hedges are about to open a new branch at Erdington, almost opposite to Mr. Gould's shop. There will then be about eight chemists' shops in this suburb of 25,000 inhabitants. These are in addition to Mr. Craue's two branches and one pharmacy each at Fentham Road and Ensor Road.

The character of the chemists' shop-window displays is changing. The premier arcade shop favours tortoise-shell combs for ladies' hair and other similar nick-nacks. Messrs. Needhams, in their New Street shop, have a unique display of soap and perfumes arranged in a blaze of violet, which looks very effective.

There is a flutter in the female-dispenser dovescotes relative to a medium-sized plum in the shape of the Warndcliffe Hospital dispensership, which has been held for some years by a Leamington lady, Miss Kate North, and which is shortly to become vacant. Several of the General Hospital pupils are in the running, and one of them stands a good chance.

The beer of our ancestors must have been a soul-inspiring beverage, according to the Birmingham University Professor of Brewing. He states in the "Mail" that for "Reading beer" the following were recommended: malt, hops, grains of paradise, coriander seed, sugar, and Indian bark; and for "London ale" orange-powder (?) salt of tartar, and bean flower. "Window ale" had orange, pea, honey, and liquorice added. "Scurvy-grass ale" contained malt, garden scurvy grass, hops, Alexandrian senna, molasses, etc. Other ingredients mentioned are

essentia bina (?), capsicum, Spanish liquorice, cocculus indicus, ginger-alum, copperas, lime, linseed, salt of tartar, and cinnamon-bark.

Liverpool Notes.

Messrs. Boots, Ltd., are opening a branch shop in Hoylake. It is reported that the company contemplate more branches in this district and elsewhere, until their shops total 500.

In the early morning of Friday, February 18, there was a serious outbreak of fire at the Parkhill Fever Hospital. The nurses' house and maids' department were completely burnt out, but the administrative portion of the building escaped with a charring. Many of the patients had to be moved, but no lives were lost and no personal injuries sustained. The outbreak was attributed to the heavy wind blowing the curtains of an open window into a lighted gas-jet.

The twenty-fifth annual dinner of the Liverpool and District Mineral-water Manufacturers' and Bottlers' Association was held on February 17 in the Hotel St. George. Mr. James Litherland (President of the Manchester Association), in offering the toast of "The Liverpool Association," complimented the members upon the fact that the Association had made a profit during the year of 176*l.*, and on the progress they made in the past in maintaining an all-round minimum price of 9*d.* per doz. Mr. John Davies (the President), in responding, referred to what he regarded as the unreasonable price of saccharin. He suggested that for the production of sugar the beet-growing industry should be established in this country, instead of leaving the Continental countries to have a monopoly of it. He recommended the National Union to take this question up and induce the Government to vote half a million of money to establish the beet-growing industry in England and Ireland.

Imitation Zam-Buk.

At the Luton Borough Session on Wednesday, February 23, Joseph Pleasance, 44 Cromwell Road, Luton, was charged with obtaining by false pretences 3*d.* in money on February 14, 1910. Mr. H. W. Lathom (Luton) appeared for the Zam-Buk Co., who prosecuted.—Mr. Lathom said that although the case might appear at first sight to be ridiculously small it was not so. He had intended asking the Magistrates to send it for trial, but as he understood the defendant would plead guilty he would not do so. The prosecution was for selling an imitation article for Zam-Buk. He would bring forward five different people who had bought small boxes of ointment, believing it to be Zam-Buk. In each case defendant sold the article as genuine Zam-Buk. He represented himself as the agent of the Zam-Buk Co. and said that he was authorised by the company to sell the boxes as samples for threepence. He also stated that he was not allowed to sell more than one box at each house. The price of a box of Zam-Buk is 1*s.* 1½*d.*, but defendant said he had to sell them at the reduced price in order to increase the sales in the district. Defendant had stated that he sold twenty-seven boxes in one particular street. The preparation was scented with eucalyptus and coloured green. On each box was stamped "To advertise. Genuine." The company had had to institute prosecutions in other towns, for there seemed to be a regular system of fraud carried on. Defendant had told one of the witnesses that the company sent him the preparation in six-pound lumps with a number of chip boxes, which he himself filled.—Four female witnesses then gave evidence, in which they stated that defendant had told them definitely that the preparation in the boxes was genuine Zam-Buk. Mr. Joseph Ivatts, London manager for Messrs. C. E. Fulford, 45 Cowcross Street, E.C., the proprietors of Zam-Buk, also gave evidence. It was he who obtained all the information necessary for the prosecution. Mr. Ivatts was handed a box of the preparation sold by defendant and stated that it was only a colorable imitation of Zam-Buk. No one was authorised to sell Zam-Buk in threepenny boxes. They did not supply it in bulk to any agents, but only to the trade in boxes with the registered stamp.—Defendant was then charged and pleaded guilty, "but not with intent to cheat." The Clerk reminded him that it was a plea of "not guilty," and

he then amended his plea to "guilty." Defendant admitted selling the preparation as Zam-Buk, but said he was ignorant of the law. He was working for a man named Harrison, who told him it was Zam-Buk. He was under the impression that it was genuine Zam-Buk.—Harrison then went into the witness-box. He said the defendant had been working for him for three weeks. He obtained some of the preparation from a local chemist, who told him it was made from the same formula as Zam-Buk. He had sold the stuff himself in Luton for thirteen or fourteen weeks and had sold it as Zam-Buk. In reply to Mr. Lathom he said that he had applied to the Zam-Buk Co. for a situation, which he was unable to obtain.—Mr. Lathom: What right had you to say that it was Zam-Buk?—Witness: The chemist who supplied me told me it was made from the same formula.—Who was the chemist?—Mr. Prosser, of Luton.—Mr. Lathom told witness that he ought to be where the defendant was. When he applied to the Zam-Buk Co. for a situation did he tell them he was selling the stuff for Zam-Buk?—A Magistrate: Did Mr. Prosser tell you it was Zam-Buk?—Witness: He said it was as good as Zam-Buk.—Mr. Lathom (to witness): You fathered the lie. You told defendant it was Zam-Buk.—The Mayor, who was Chairman of the Bench, told defendant that the full penalty was 20*l.* or three months' imprisonment. The Bench felt there were extenuating circumstances as far as defendant was concerned, and that he had, in a sense, been misled. They would be lenient with him and fine him 5*l.*, including costs, or in default one month's imprisonment. Defendant was allowed until Saturday to pay.

Irish News.

When sending Newspapers containing Trade news to the Editor please mark the items.

Brevities.

Among the exports from Belfast during 1909 were 10,819 tons of aerated waters, the imports being 157 tons.

The contract for the supply of drugs and surgical appliances to the Clare Lunatic Asylum has been awarded to Messrs. Boileau and Boyd, Dublin, who guarantee to supply goods of Irish manufacture.

A fire occurred on February 16 in a large store at the rear of the drug and grocery establishment of Sir William Baxter, at Coleraine. By the efforts of the fire brigade the fire was confined to the store where it originated.

At the instance of the Irish Development Association, Patrick Mullin was summoned, at Dublin, on February 22, under the Merchandise Marks Act, for aiding and abetting a Liverpool firm to sell English-made candles as of Irish manufacture. He was fined 1*l.*, with 10*l.* costs.

At the annual meeting of the Belfast Wholesale Merchants' and Manufacturers' Association, last week, Mr. Jas. Woods (Messrs. Wm. Woods & Co., wholesale druggists, Waring Street), the retiring President, was thanked for his services during his year of office. Mr. Wm. Doig (Messrs. Wm. Doig & Co., wholesale druggists, Mill Street) was elected a vice-president.

Belfast Chemist's Estate.

Before Mr. Justice Barton, in the Irish Chancery Division, last week, in the case of McConnell and Others v. Sinclair and Others, which is a suit for the administration of the estate of the late Mr. Samuel Gibson, chemist and druggist, of King Street, Belfast, the defendants sought directions with regard to the letting and sale of some of the property. His Lordship sanctioned the granting of a lease of Montpelier House, and ordered payment to be made to Mrs. Annie Gibson of 635*l.* He was not satisfied with regard to the portion of the application dealing with Carlton House.

Phenol in Lemonade.

At Belfast County Court, on February 17, John West, grocer, sued The Lonsdale Mineral Water Co. for 20*l.* damages for breach of implied warranty in selling lemonade alleged to contain phenol. Owing to the illness of a customer who consumed the lemonade, plaintiff stated that he had suffered damage in trade. Professor Barklie deposed he knew from the smell of the bottle that it con-

tained a coal-tar product, and by chemical means he detected phenol. He did not think the smell was due to the stopper of the bottle or the indiarubber washer. The bottle may have been used for phenol by some incautious person and not properly cleaned. Counsel for the defence suggested that, as carbolic acid is very commonly used as a disinfectant, it must have got into the bottle after it left defendant's premises. Judge Shaw gave a decree for one shilling, as the evidence failed to show any loss of trade.

Creditors' Meeting.

A meeting of the creditors of Mr. E. R. Stringer, drug merchant, of Dalkey, has been held at the office of Messrs. Scallan & Co., solicitors, Dublin. It was proposed that the estate should be offered for sale. The liabilities are 295*l.* 13*s.*, with assets 117*l.* 10*s.* The following are among the creditors: Boileau & Boyd, Dublin, 49*l.*; and Hugh Moore & Alexander, Dublin, 10*l.*

A meeting of the creditors of Mr. Moore Wilkinson, registered druggist, Belfast, was held on February 18, in pursuance of a circular sent out by Mr. R. H. Parke, Monaghan. The accounts submitted showed liability 311*l.*, and assets available for dividend 35*l.* The debtor stated that his present position is due to heavy expenses of an illness. An offer was accepted of 5*s.* in the pound at three and six months, both payments secured. Amongst the creditors are Samuel Gibson (Belfast), 24*l.* 10*s.*; Lorimer & Co. (Islington), 11*l.*; T. and W. McMullan (Belfast), 52*l.*; A. McCurdy (Belfast), 11*l.* 5*s.*; A. Saunderson & Co. (Hull), 11*l.* 15*s.*; White Band Chemical Co., 2*l.* 2*s.*; Burge, Warren & Ridgley, 2*l.* 3*s.* 4*d.*; D. & W. Gibbs, 2*l.* 4*s.* 10*d.*; W. Doig & Co., 3*l.* 0*s.* 5*d.*; Cupal, Ltd., 3*l.* 16*s.*; G. Boehm, 11*s.* 7*d.*; A. de St. Dahmas & Co., 18*s.* 3*d.*; Liebig's Wine Co., 3*l.* 12*s.*; Blyton, Astley & Co., 4*l.* 3*s.* 5*d.*; Kaputine Syndicate, Ltd., 1*l.* 11*s.* 6*d.*; Suttley & Silverlock, 6*l.* 8*s.* 4*d.*

Scots News.

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Edinburgh.

Mr. Graham Davidson, chemist and druggist, Earl Grey Street, is offering this week a 6*d.* tooth-brush and a 6*d.* box of tooth-powder for 5½*d.* complete.

It is rumoured that the "Store" intend starting a chemist's business in the Morningside district after suitable premises have been secured in Leith Walk.

Mr. Victor Wright, as Vice-President of the Abbeyhill Men's Brotherhood, presided on Sunday afternoon over the largest meeting this Association has ever held.

Glasgow.

Burglars visited the premises of Messrs. George Walker & Son, Ltd., chemical manufacturers, Bridgeton, Glasgow, on Friday night, February 18, and, having drugged the watch-dog, they turned their attention to the safes, one of which, containing 5*l.* or 6*l.*, was blown open.

An amusing discussion, reported at considerable length in several Scots newspapers, took place in Glasgow Town Council last week over a motion to protect the people against unqualified dentists. Councillor Rosslyn Mitchell, who seconded, said that something should be done to rid the city of quacks.

French News.

(From the "C. & D." Correspondent.)

SCIENCE AND STREET NAMES.—The Seventh Arrondissement of Paris now possesses an Avenue Moissar, named after the eminent chemist who died a few years ago and was for many years professor at the Paris School of Pharmacy.

SUICIDE OF A DENTIST.—A Paris dentist, named M. Louis Chenet, during a fit of neurasthenia a few days ago, took a large dose of trional in a glass of absinthe. He was conveyed to the Lariboisière Hospital, where the stomach pump was applied, but he expired soon after arriving.

FIRE AT A SULPHUR WORKS.—A fire of unusual intensity destroyed an extensive sulphur manufactory near Frontignan, Hérault, on Sunday night, February 20. The works being near the railway, the wooden sleepers of the line caught fire and traffic was interrupted. The amount of sulphurous acid given off was so great that for a long time all attempt to approach the fire was out of the question.

EXPLOSION AT A PERFUMERY WORKS.—A still exploded one afternoon last week at M. Bing's perfumery manufactory, 5 Rue Pierre L'Ermite, Paris. M. Henri Reynaud, chemist, who was standing near by, was thrown down by the violence of the shock, and, the alcohol contained in the apparatus catching fire, the burning liquid flowed over him. Chevillard, the watchman, who went to the rescue, was also burned, and the caretaker's wife and two children were injured by broken glass. The chemist was taken to the Lariboisière Hospital.

THE GALEN CLUB.—Some thirty members and friends of this Paris chemists' assistants' fraternity met at the Café de la Petite Bourse on Saturday, February 19, when the air was soon laden with smoke and song. Mr. Clitheroe's Irish songs were much applauded, while Mr. Jones's Welsh song in the vernacular inspired awe, and Mr. Macdonald's effort was worthy of Scotland. Altogether the programme was quite British. Other attractions were Mr. Pearson's violin solos, songs by Messrs. Baxter, Parsons, Reilly, Kelsey, and Urquhart, and all-round choruses by the company in general. Mr. Bond as accompanist worked as hard at the piano as he had all day at the pharmacy. Altogether the smoking concert was one of the best the club has held.

TRAGIC DEATH OF A PHARMACIST.—Another crime of a tragic and mysterious nature is recorded in Paris, the victim being a pharmacist named M. Eugène V. M. Caillard, residing at Rue Ferdinand Fabre, Paris. His body was found below the fortifications of the city near the Boulevard Bessières last Sunday morning. His face bore an expression of terror, the eyes were wide open, and the head was badly injured, giving the appearance of having been struck violently. In addition to this, the victim's throat was bound by a cord tightly knotted. Some of the pockets were turned inside out, as though they had been rifled. The identity of the deceased was revealed by papers found on the body, and inquiry elicited the facts that although M. Caillard had been in business in two different provincial towns as a pharmacist, he being duly qualified, of late he had been acting as agent for a Paris insurance company. He left his home on Saturday, stating that he should only return rather late in the evening. When the police arrived at the residence on Sunday morning they found Mme. Caillard, who had passed a sleepless night, on the point of going to the police-station to announce her husband as missing. The question of suicide has been suggested, but the expert detectives appear to consider that hypothesis untenable. The crime has caused a feeling of uneasiness in Paris, as assassinations of this description, and of which the perpetrators remain unpunished because undiscovered, have been too frequent. The police are of opinion that M. Caillard was attacked and then brought to the fortifications, where the body was thrown into the moat. The cord was probably placed round the neck after death had taken place. M. Caillard was forty-three years of age, and, being endowed with unusual physical strength, he could only have been assassinated by treachery or overwhelming force. He led a regular existence, and, amongst other things, was in the habit of conducting his daughter, a girl of thirteen, to school every morning. He was in business until a year ago at Noyon, and previously at St. Malo.

A PHARMACIST'S TAMING OF THE SHREW.—A quite extraordinary story has been the talk of Paris during the past few days, the unenviable hero being M. Jean Parat, a pharmacist in business at 225 Rue de Vaugirard. Several months ago complaints were made to the Prefecture of Police that the pharmacist was sequestering his wife and submitting her to a treatment and form of attire which, legend has it, was occasionally used during the times of the Knight Crusaders. At that time the pharmacist and his wife were called before a police magistrate, and some of the allegations put forward were proved to be founded, so that the husband was cautioned and warned as to his

treatment of his wife. A few days ago information, apparently supplied by Mme. Parat's relatives, was again given to the police, and the Chief of the Paris Detective Service, M. Hamard, made a domiciliary visit to the pharmacy in the absence of the husband, accompanied by Dr. Socquet, the police medical officer. They found the lady locked in a small room, and a locksmith had to be requisitioned to break the door open. She was discovered seated on a chair near a bed with an infant of about three months in her arms. A child of three years was also in the room. Mme. Parat was held to the chair by two chains, which went round her neck and were fastened to a wardrobe. One end of a chain was also secured to the bed by a padlock. In order to free the lady it was found necessary to file right through the iron bar of the bedstead, and she was taken away, still bearing the chains, to the Prefecture in a taxi-auto by the representatives of the police. It was impossible to file through the chains at the time without hurting the wearer. A short time after when M. Parat returned to the pharmacy he was arrested, and the business was left in the charge of an assistant. M. Parat is forty-two years of age and his wife nine years younger. It appears that the husband was inordinately jealous and his mental condition is also in question. The details that have been published concerning the case have been of a somewhat remarkable nature. It appears that the couple were intimate before the pharmacist passed the final examination and they married soon after he became qualified. The case is receiving the close attention of the police and remains for the present *sub judice*. M. Parat remains in custody and attributes his arrest to a plot formed by his wife. He appears to consider the abominable method he employed for guaranteeing his wife's fidelity as quite normal. He has no special accusation or reproach to make against her, but thought prudence the best way to safety! Mme. Parat has returned home and supervises the pharmacy as the means of providing for her five children and herself. Unfortunately, however, the scandal now surrounding the place has had a natural tendency to drive business away.

South African News.

"The Chemist and Druggist" is regularly supplied by order to all the members of the seven Societies and Associations of Chemists in business in British South Africa.

Cape Colony.

REGISTERED.—On the recommendation of the Colonial Pharmacy Board a licence has been granted to Mr. Alphonso M. de Wit to practice as a chemist and druggist in Cape Colony.

FIRE.—During the evening of January 31 a fire broke out in the wholesale premises of Messrs. Petersen, Ltd., Cape Town. Considerable damage was done to a stock of labels and stationery, but the efforts of the fire brigade were successful in preventing its extension to the drug-departments.

MEDICINE STAMPS.—The current issue of the "South African Medical Journal" contains a vigorous indictment of the amended Stamp Act. From the medical man's point of view the Act of 1909 is far more unsatisfactory than that of 1908. It would seem from the articles that the only class of opinion thought likely to be in favour of the Act is decidedly against it.

UNSTAMPED PROPRIETARIES.—At the Mowbray, Cape Town, Police Court on January 28, Mr. Joseph Sowden, chemist and druggist, Main Road, Mowbray, was fined 2*l.* and 1*l.* on two charges of exposing for sale certain proprietary medicines without the stamps required by law being affixed. The articles unstamped included eau de Cologne, Red Cross baby powder, Odol, Edwards' Harlene, tabloids, phospherine, tooth-paste, Santal Perles, Cuticura soap, Beecham's pills, and Doan's pills.

EDUCATIONAL.—Mr. W. Froembling, President of the Pharmaceutical Society of Cape Colony, gave an interesting lecture on botany on January 27, to inaugurate the new series of classes the Society are holding this year. The attendance was only moderate, but the lecture was fol-

lowed with close attention by several prospective students. By the generosity of Messrs. Burroughs Wellcome & Co., the Society's school has become enriched by the addition of a balance, which was presented through Mr. J. Patterson, their local representative.

Orange River Colony.

PERSONAL.—About twenty of the local chemists, representing all the firm in town, met together at the Imperial Hotel, Bloemfontein, on January 29, to bid farewell to Mr. John Main, of Messrs. Petersen, Ltd., on the occasion of his leaving Bloemfontein to take up the management of the same firm's extensive business in Johannesburg. Mr. Carter on behalf of the Pharmaceutical Society, Mr. Hutcheson as a member of the Caledonian Society, Mr. Fulton representing the wholesale drug trade, Mr. McMurray on behalf of the staff of Petersen, Ltd., and Mr. Stafford S. Hewitt as a retail chemist and a very old friend, spoke in the highest terms of the esteem in which Mr. Main was universally held, and expressed the regret felt by all at his departure from the Colony. During the evening songs were tastefully rendered by Messrs. Hutcheson and Lyall and Mr. Main. Mr. Main was a member of the Medical and Pharmaceutical Council of the Orange River Colony and a pharmaceutical examiner.

Transvaal.

FIRE.—A fire broke out on the premises of Mr. A. Cohen, chemist, Market Street, Johannesburg, on Sunday afternoon, January 23, and but for the timely arrival of the brigade the establishment would have been gutted. As it was the damage sustained, chiefly by water, is estimated at 200*l.*, and is covered by insurance. Mr. Cohen had just recently removed into these premises from the opposite side of the street.

TO FIGHT MALARIA.—An association has been formed in Johannesburg to combat malaria in the Transvaal. Lord Selborne was present at the inception on February 1, and spoke at length on the good work done by Colonel Gorges, of the U.S. Medical Service, during the last four years on the Isthmus of Panama. Dr. Bestock, of the Transvaal Railway Medical Staff, also spoke of the habits of the mosquito. Among others present at the gathering were Mr. Lionel Phillips, Sir Kendal Franks, Dr. Davies (President of the Transvaal Medical Council), and Drs. Rogers, Leech, McKenzie, Abelheim, and Ross. Mr. W. A. J. Cameron, Medical Council Offices, Von Brundis Square, is the Secretary.

A NEW FIRM has commenced business in Johannesburg under the style of Messrs. J. Johnston & Co., wholesale and manufacturing chemists and druggists. The members of the firm consist of Mr. J. Johnston (late manager for Petersen, Ltd., Johannesburg), Mr. H. M. Hetherington (who was for five years in charge of the manufacturing department of Petersen, Ltd.), and Mr. Friedmann (late of Messrs. Sive Bros. and Karnovsky, Ltd.). The firm will confine themselves to wholesale only, undertaking the manufacture of galenicals and packing of "own name" specialties. The combination is considered to be strong, and it is anticipated they will secure a fair share of Transvaal trade.

INJURIES OF THE EYELIDS.—First ascertain if there be any abrasion of the cornea, for, if so, on no account must lead lotion be applied, lest a dense white deposit of lead carbonate be left which seriously impairs the vision.—*Hospital*.

SUBSTITUTION.—A campaign has just been started in Montreal with the object of bringing druggists to book who substitute goods for those called for by customers. One action has been taken in the police court as a test case by Mr. W. C. Miller, against one of the leading druggists, on the charge of obtaining money under false pretences, and the outcome of this case is being awaited with a good deal of interest by druggists all over the Dominion and the United States. The name of the accused has not yet transpired, as he is supposed to be ill, he having produced a doctor's certificate to this effect. Details of the charge are to the effect that a customer presented at his counter a prescription from Dr. Duhamel calling for a bottle of "Gude's Peptomangan," and received a bottle of "Manganese Peptonized," a colourable imitation.

Legal Reports.

High Court Cases.

[Unless where otherwise stated the actions are in the High Courts of Justice, London.]

THERMOS, LTD. v. ISOLA, LTD.

In the Court of Appeal on February 18, before Lord Justice Vaughan Williams and Lord Justice Farwell, two interrogatory appeals from orders made by Mr. Justice Neville in this action were heard. The greater part of the hearing was taken up by a discussion between Mr. Walter, K.C. (who appeared for the plaintiff company), and Mr. Bousfield, K.C., and Mr. Colefax (who appeared for the defendants), upon a point of law arising from the Patent Act, 1906, especially that part of it which makes it possible for a patent to be revoked in this country when it is shown that the manufacture of a patented article is mainly or exclusively carried on abroad. Mr. Walter submitted to the Court that it might be possible for conditions to arise in which a patented article is made in this country by the thousand and abroad by the million, there being no connection between the patented article in this country and the makers abroad, and none of the foreign articles coming into this country, yet the British patent might be revoked on the ground that the article is mainly or exclusively manufactured abroad. The defendants had said that the plaintiffs' article is mainly or exclusively manufactured abroad, whereupon the plaintiffs asked that they should supply the particulars of what they relied upon before the plaintiffs gave discovery of the facts. Mr. Justice Neville refused the necessary order, and hence this appeal. It was alleged by counsel for the defence that the Thermos flasks are marked "Made in Germany," and they submitted that this was sufficient discovery of their contention. Their Lordships suggested to Mr. Bousfield amendment of the pleadings, but agreement on this point could not be arrived at, and after the argument was completed their Lordships allowed the appeal. In giving his decision Lord Justice Vaughan Williams said the defence in this case was drawn up in a form in which it was impossible for anyone to know what were the issues which the defendants intended to set up. Under these circumstances, and inasmuch as Mr. Bousfield could not bring himself to apply to amend the defence by stating unambiguously what really was the basis of his defence and what really were the issues raised, two consequences followed. First, the plaintiffs were entitled to have particulars of the defence in the form asked for, and, so far as this was concerned, costs must be paid by defendants. With regard to the discovery asked for by defendants, in his Lordship's opinion the defence was in such a condition that it would be wrong to order discovery at present. Until the issues to be raised—and relevant to which affidavit of discovery would have to be made—were made plain it would be wrong to have the discovery. Therefore that order also would be discharged, and defendants must pay the costs. All these orders, therefore, would be discharged. Both parties, of course, would have liberty to make further applications in the ordinary way when occasion arose. There was no need in this case, continued his Lordship, to consider whether Mr. Justice Parker's decision (which had been mentioned in the argument) was right or wrong. For the purpose of this case he assumed that the judgment was perfectly right, and that the construction put by Mr. Justice Parker upon the statute was right.—Lord Justice Farwell concurred, and in doing so expressly disclaimed the intention of commenting upon the judgment of Mr. Justice Parker.

COLONEL'S LOAN TO A CHEMIST.

Mr. Justice Coleridge, sitting in the King's Bench Division on Tuesday, February 22, with a common jury, heard an action brought by Colonel Alfred Hercules Mayhew, of Pall Mall Place, against Mr. Alexander Boyes, a chemist's traveller, of 77, Cecil Park, Crouch End, to recover the sum of 107*l.* on a promissory note. The defence was that Mr. Boyes was only a surety and he was relieved from liability. He counter-claimed for 25*l.* due as commission.

contending that if he was responsible for the sum on the note he was also entitled to receive the sum claimed for commission.

Mr. Edward Morton, K.C., for the plaintiff, stated that his client some years ago suffered from deafness, and consulted a Dr. Dakhyll, who cured him. A Mr. Irving Alexander Moffat was at that time dispenser to the doctor, and was anxious to commence business on his own account as a chemist and druggist at a shop in Church Street, Twickenham. He was prevented from doing this, however, by lack of funds, but upon being asked by Dr. Dakhyll, the plaintiff agreed to lend Mr. Moffat 200*l.* Colonel Mayhew understood that the loan would be fully secured. Eventually, Mr. Moffat sent to the plaintiff a mortgage deed, the lease of his shop, a life policy for 300*l.*, and a promissory note for 100*l.*, the agreement being that Mr. Moffat should repay the loan by instalments of 25*l.*.

His Lordship: Who is Boyes; how does he come into this matter?

Mr. Morton: He was interested in the drug trade. It is for my friend representing him to show how he came into the matter. As a matter of fact, counsel continued, Mr. Moffat only paid one 25*l.*, and then failed, putting forward a deed of assignment, under which, however, the colonel got nothing. Mr. Moffat had since gone to Paris. Then plaintiff got a letter from Mr. Boyes, who seemed to be protecting Mr. Moffat's interests, and he suggested that he (plaintiff) should buy the fixtures of the shop and get a purchaser for the business, by which means he would get his money back. Colonel Mayhew gave 70*l.* for the fixtures, and was given to understand that there would be no further expense. Shortly afterwards Mr. Boyes said he had found a purchaser, and put a Mr. Andrews into the shop, but Andrews went bankrupt. There was a distress levied upon the colonel's fixtures for rent, the result being that he had to pay 12*l.* to get rid of the bailiff. The fixtures, sold by auction eventually, fetched 22*l.*, and the plaintiff had lost altogether 58*l.* 2*s.* 8*d.* on that part of his contract. He was now charged commission by Mr. Boyes, who said he was entitled to 25*l.* for having introduced Mr. Andrews—(laughter)—and, as he understood it, Mr. Boyes said that he signed the promissory note in question as a surety for Mr. Moffat.

Colonel Mayhew then gave evidence.

Mr. Boyes, in the witness-box, said Mr. Moffat asked him to sign the promissory note and act as surety for 100*l.* He said he would do so providing proper securities were put forward, so that if he became responsible he would have something to fall back upon. Those securities were forthcoming, and were placed before Colonel Mayhew, who approved of them. He did not know that Moffat got into difficulties until a long time afterwards. He heard of it from his firm, who were wholesale druggists, and he then found Andrews, who appeared to be a likely purchaser. In answer to Mr. Morton, witness said he signed the note as a surety only, although he knew the note ran: "We jointly and severally promise to pay," etc.

Mr. Montague Shearman, K.C., appearing for the defendant, said that Colonel Mayhew had entered into an agreement to the effect that he would give time to Moffat to pay the full amount, and would not press for the payment of his money, although the other creditors only received 7*s.* 6*d.* in the pound. Then Moffat left the country, and it was not until twelve months or more afterwards that plaintiff knew the defendant as being a party to the bill, although it was perfectly plain to him that Boyes simply signed as a surety. Therefore, he contended that, having regard to the agreement, the colonel had waived his right to sue the defendant whether as surety or anything else.

The hearing was resumed on Wednesday, when counsel for both parties addressed the jury.

His Lordship said Colonel Mayhew acted generously to Mr. Moffat in agreeing not to press for the payment of his loan at once and at a time when other creditors were pressing, but on March 16 he, with the creditors, signed an agreement to receive a composition of 7*s.* 6*d.* in the pound. After that, however, Moffat agreed to pay the Colonel in full, and that, said his Lordship, was really a violation of the bankruptcy laws, although perhaps plaintiff did not know that at the time. It was said that

the agreement in question did not relieve any surety of liability.

Four questions were put to the jury, which they answered in defendant's favour. His Lordship, however, reserved judgment pending the hearing of arguments on a point of law raised by plaintiff's counsel.

Sale of Food and Drugs Acts.

OLIVE OIL.

At the Barnsley, West Riding, Police Court on February 21, William Horsfield, grocer, Dodworth, was charged with having sold a quantity of olive oil that was not of the nature and substance demanded by the purchaser. Mr. Jones, from the West Riding Solicitors' office, appeared to prosecute; Mr. Norman Crombie, York, was for the defendant and also for Messrs. Bleasdale, Ltd.; and other parties interested, whose names were not mentioned, were represented by Mr. J. Raley, Barnsley, and Mr. H. S. Cautley, M.P.

Mr. Jones explained that on January 13 Inspector Bandy went to defendant's shop, which was in charge of his daughter, and purchased 4 oz. of olive oil, for which he paid 8d. The sample was divided in the usual way for analysis, and the county analyst's report showed that the sample contained not less than 50 per cent. of arachis oil, and not more than 50 per cent. of olive oil. The analyst was of opinion that the sample had been adulterated to the extent of the added arachis oil. Mr. Jones added that Horsfield was relying for his defence on a guarantee given him by Mr. Billington, chemist, Barnsley, from whom he bought the olive oil; and Mr. Billington had also written to the County Council stating that he, too, would rely upon a warranty which he received from Messrs. Bleasdale, Ltd., York.

Mr. Cautley, interrupting, said he appeared for a party "lower down" in the case. This oil had gone through a number of hands, and there were legal proceedings pending between the various sellers. He thought it desirable, however, that names should be left out of the present proceedings, which might do enormous damage to the commercial reputations of some of the firms whose names were not necessary for the purpose of that hearing.

The Magistrates' Clerk: I am disposed to advise the Bench to keep out all names except those of people directly concerned.

Mr. Raley said he appeared for somebody "at the bottom of the list," and he agreed with Mr. Cautley.

The Clerk: All the Magistrates have got to do with is Mr. Horsfield and Mr. Billington. I suppose it is proposed on behalf of Horsfield to prove the warranty?

Mr. Crombie said that was so.

Formal evidence of the purchase of the oil was given by Inspector Bandy, who produced the analyst's certificate, and was briefly cross-examined by Mr. Crombie as to the use of arachis oil as an admixture with olive oil.

This constituted the case for the prosecution, and, addressing the Bench, Mr. Crombie explained that the defendant's small shop was managed by his daughter, whilst he himself worked as a wood-turner and circular sawyer. He admitted that olive oil was asked for, and he did not gainsay any of the statements that had been made; but so far as Horsfield was concerned he certainly believed that what he was selling was of the substance and quality demanded. He proposed to call Mr. Billington, a gentleman very well known, he believed, as a chemist in the wholesale as well as the retail trade. He had bought the oil from Messrs. Bleasdale, wholesale druggists, York, and they in turn had purchased it from a large London house. He should call Mr. Atkinson, Messrs. Bleasdale's chemist, who tested this oil on its receipt, in accordance with the British Pharmacopoeia, which gave four tests, to all of which this oil answered. In the B.P. Codex, published three years ago, there was no suggestion of olive oil being mixed with arachis oil, and it was only quite recently that that oil had become known as an adulterant of olive oil. Under these circumstances, the point he wanted to make was that if the mixture could be tested by Messrs. Bleasdale's chemist in their laboratory, if it could pass the B.P. tests, the highest standard in the British Islands at the present time, then, obviously, a man in Mr. Hors-

field's position, a wood-sawyer, could hardly be expected to know that it was adulterated.

The defendant, William Horsfield, gave evidence regarding his purchase of the olive oil, and he produced the warranty supplied to him by Mr. Billington at the time he received the invoice.

Herbert Bennett Billington, chemist and wholesale druggist, 125 Sheffield Road, Barnsley, corroborated so far as his sale to Horsfield was concerned. He had no reason to believe that this "olive oil" was anything but the genuine oil, and bought it as genuine B.P. olive oil from Bleasdale, Ltd., from whom he had a written warranty. Replying to the Chairman, witness said he bought a 6-gallon drum and bottled the oil himself. Horsfield would in turn put the oil into smaller bottles.

Thomas Kaywood Atkinson, chemist, in the employ of Messrs. Bleasdale, Ltd., said that the practice on the receipt by his firm of consignments of olive oil was for a sample to be drawn and tested, in accordance with the B.P. requirements, by witness in the laboratory. If the material did not answer those tests it was immediately sent back. It would not enter their warehouse at all. They would not keep it for a moment. He tested a sample of the oil in question on October 26, applying the four B.P. tests—appearance, specific gravity, congealing test, and the silver test. He was not aware until recently that arachis oil was used as an adulterant. Until recently the price of the two oils was about the same; in fact, common olive oil was not so expensive as arachis oil.

Mr. Crombie: We do not want to introduce any names, but I think I am entitled to say this, that you bought the "olive oil" with a warranty from one of the best London houses, so far as you are aware?—Yes.

And sold it in the same state as you bought it?—Yes.

If you had no idea that the olive oil was adulterated, Mr. Horsfield could not have?—No, he could not possibly.

This closed the case, Mr. Crombie remarking that he felt sure that it was not the man who sold a shilling's-worth of olive oil in twelve months that the Bench wanted to deal with. It was the fountain-head.

The case was dismissed.

COD-LIVER OIL WARRANTY.

At the Liverpool Police Court, before the Stipendiary Magistrate (Mr. T. Shepherd Little), on Wednesday, February 23, Ayrton, Saunders & Kemp, Ltd., wholesale chemists, Liverpool, were summoned on the information of the Liverpool Corporation for giving a false warranty with cod-liver oil sold to John Irwin, Sons & Co. (C. & D., January 22, p. 106, and February 3, p. 212). Mr. Clayton prosecuted, and Mr. Greaves Lord appeared for Messrs. Ayrton, Saunders & Kemp.

Counsel for the prosecution having outlined the circumstances previous to the present proceedings,

Mr. Lord said he was not there to dispute the giving of the warranty, but he would call evidence to show that the oil was sold to Irwin's as received, nothing having been done to it except to bottle it. He also represented the firm in London from whom defendants purchased it, and was prepared to offer an explanation of the circumstances so far as they were able.

The Magistrate: Do you think that a satisfactory answer to the case? It seems to me, if you are going to take it right back, it will land us into some difficulties.

Mr. Lord: My position is that the people from whom this oil was bought are the importers from Norway.

The Magistrate: That is the point I am getting at. I thought that they were the Norwegians.

Mr. Lord proceeded to state that defendants had no reason to believe that the warranty on which they bought was other than good. He quoted the "false warranty" section of the Act, and added that they had in this case the highest warranty that it was possible to give—namely, that it was a "B.P." standard warranty. With regard to the London firm, he understood they purchased from shippers of considerable reputation, and during the whole of their business it was the very first case that had been raised. The oil was described as "Finest Norwegian cod-liver oil, guaranteed non-freezing." The adulteration which was said to be in this oil was mineral oil, and the people in London for whom

he appeared knew of no mineral oil which could be put in cod-liver oil to increase the profit on the latter. The mineral oil would be dearer than the cod-liver oil.

The Magistrate: Then you are contesting the analysis?

Mr. Lord: No, because the analysis says there is mineral oil in it, and, assuming it is so, my contention is that it could not have been put in for an ulterior motive.

The Magistrate: Then it must have been an accident!

Mr. Lord: That is so. I am not putting that as a full answer. My position is that this is the first opportunity of putting their explanation before you. Replying further to the Stipendiary, Mr. Lord said he was not in a position to take the case of the original warranty from the London firm then.

The case for the prosecution proceeded on previous lines, the witnesses being Arthur Irwin, acting manager of Messrs. Irwin's, and Mr. Collingwood Williams, City Analyst, who had given a certificate to the effect that the oil contained a quantity of other fish oil, most probably shark's liver oil, and, as the result of a further examination, certified that it was adulterated with 25 per cent. mineral oil, and, further, he was satisfied that it was not oil of animal origin.

Mr. Adameon, called for the defence, stated that they had a contract with a Norway maker for cod-liver oil, but, running short, in September they gave an order to Messrs. Creighton Bros., of London, who consigned and warranted the supply "B.P." When Mr. Irwin and witness had the conversation with reference to the oil these proceedings had not begun. He thought it only fair to his firm to explain that immediately the complaint was made they collected the whole of the supply in from Messrs. Irwin and other purchasers.

In examination by the Magistrate, Mr. Adameon explained that they had an analyst for the purpose of protecting themselves.

The Magistrate: Why did you not analyse this lot?—Witness replied that just then the analyst was on holidays.

Then on this occasion the ordinary course of business was not pursued?—No, we relied upon the warranty.

That is the real explanation why this adulterated oil was put on the market?—That is the only reason I can give. If it had been analysed it would never have been sent out.

Then you do send out some you have not analysed?—Yes.

That gives the case quite a different complexion. Are Creighton Bros. the importers?—Yes.

Do you rely upon them to analyse it?—I have no means of knowing. I only presume they would protect themselves.

Evidence of other members of the defendants' company having been given,

The Magistrate asked Mr. Lord if he proposed calling anyone for Messrs. Creighton Bros., and Mr. Lord replied in the negative. Counsel then proceeded to argue the case on the legal points, and eventually his Worship suggested that it would be better if Messrs. Creighton appeared before him. Counsel agreeing, the hearing was adjourned for four weeks.

The adjourned case against Abraham Jones was, on the application of the prosecution, allowed to be withdrawn, no order as to costs being asked for.

County Court Case.

HARRY S. SEQUAH'S 30s. "CURES."

At the Hanley County Court last week, before Judge Ruegg, K.C., Harry S. Sequah, who was described as an Indian herbalist, of Tontine Street, Hanley, sued Charles Allport, caretaker, Grove Street, Cobridge, for 5s., balance of an account for 30s., for which sum the plaintiff had undertaken to cure the defendant's wife of rheumatism.—His Honour (to plaintiff): Can you cure rheumatism?—Plaintiff: I can, sir.—His Honour: What was he going to get for his 30s.? Were you going to kill his wife or cure her?—Plaintiff: Cure her, your Honour. I don't want the hangman's rope round my neck yet, sir.—His Honour: Have you cured her?—Plaintiff: Yes, sir; permanently.—His Honour (to defendant): He says he made a contract to cure your wife for 30s. He says he has cured

her, and you have only paid him 25s. Has he cured her?—Defendant: No, sir; she is under the doctor now, and has been ever since.—His Honour: Is she here?—Defendant: No, sir; she has been seriously ill this Christmas. I have a ton of his medicine—all quackery—at home. He has injured her instead of doing her good, and considerably injured her, as I can prove.—His Honour: It is a pity she is not here.—Defendant: She cannot get about.—His Honour said the plaintiff had undertaken what no member of the medical profession would guarantee to do, and that was to cure a person suffering from rheumatism for 30s. He was not satisfied that the plaintiff had cured her, and there would be judgment for the defendant, with costs.

In a second case the same plaintiff claimed 15s. from a man named Bracegirdle, who lives in Wellington Street, Fenton. Plaintiff said the defendant came to him with an injured kneecap, and told him all other remedies had been of no use. Plaintiff agreed to cure him for 30s. When the man first came he used two sticks to walk with, but some time ago he came from Fenton without the aid of one stick. He believed defendant had been to work since, which (plaintiff contended) was proof that he had been cured.—Defendant denied that he had been cured and said the injured knee was as bad as ever.—His Honour, in giving a verdict for defendant, said he might be quite sure that, if a doctor could not do anything for his knee, "this man" (plaintiff) could not. He did not think there was the least ability on plaintiff's part to cure.

INSPECTION OF BUSINESS BOOKS.

In the Shoreditch County Court on February 17, an application was made to Judge Smyly, K.C., in the case of the Union Rubber and Chemical Co., Ltd., 41 Great Eastern Street, E.C., chemical manufacturers, against F. Cowan, 59 Cleveland Road, Barnes, a traveller, and T. Cohen, 6 Hazlemere Road, Kilburn, in which a claim for 13l. 19s. 5d. was made. The case had been before the Court previously, and it appeared that the defendant Cowan was a traveller in chemicals for the plaintiffs, and was guaranteed by Cohen to the amount of 100l. It was suggested that Cowan had collected from chemical-buyers moneys belonging to the plaintiffs and retained it, but, on the other hand, he had entered a counterclaim alleging that a far larger sum than that claimed was due to him for commissions, and he asked for an inspection of the plaintiffs' books and an account. Judge Smyly referred the question of the plaintiffs' account to the Registrar, and ordered an inspection of the books. The question before the Court last week was as to where the inspection of books should take place. The plaintiffs' trading office is in Manchester, but for the convenience of the defendant Cowan they had brought their books for one day to London, and defendant said that was not enough. After hearing the arguments of counsel his Honour said the Registrar had found the plaintiffs entitled to 13l. 3s. 8d. out of their claim for 13l. 19s. 5d. If defendant wanted to go on with his counterclaim he must go to Manchester for the inspection. An order was made accordingly.

Bankruptcy Report.

Re William Henry Beable, lately trading as Dr. Gardner's Remedies Co., 4 Featherstone Buildings, Holborn, W.C. The public examination of this debtor was held at the London Bankruptcy Court, before Mr. Registrar Giffard, on February 23. The accounts showed total liabilities 2,191l. 12s. 1d. (unsecured, 1,651l. 12s. 1d.), and assets 22l. 12s. 6d. The debtor stated that until shortly before the receiving order he acted as managing director of Beable's Advertising Agency, Ltd. In April 1908 he purchased for 200l. a business carried on under the style of Dr. Gardner's Remedies Co., and continued it under a manager, at first at 180 Fleet Street, and afterwards at 4 Featherstone Buildings, Holborn. In January 1909 the stock and fittings were sold under a distress for rent, and he transferred his interest in the goodwill of the business to a creditor in settlement of a debt of 85l. Witness attributed his insolvency to a loss of 1,251l. in connection with the Dr. Gardner's Remedies business, and a loss of 745l. by Stock Exchange speculations. This was his first failure. The examination was concluded.

Gazette.

Partnerships Dissolved.

MASON, A., and HAY, W. L., Deal and Walmer, Kent, physicians and surgeons, under the style of Mason & Hay.
PRICE, S. E., and D'ARCY GERARD PRICE, H. J., Tipton, Staffs., surgeons, etc., under the style of S. & H. Price.

The Bankruptcy Acts, 1883 and 1890.

ADJUDICATION.

ROLSTON, THOMAS RESTARICK, Devonport, surgeon.
THORNHILL, JONATHAN ALLAN, Newnham-on-Severn, Glos., surgeon and physician.

New Companies Registered.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

STANDARD OIL CO. OF ENGLAND, LTD.—Capital 1,000*l.*, in 1*l.* shares. Objects: To acquire and turn to account oil and shale properties, and to search for oil, coal, and bituminous substances in Great Britain and elsewhere.

SIMPLE REMEDIES, LTD. (P.C.).—Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturers of and dealers in patent medicines, etc. The first subscribers are A. Baker, 142 Raskin Avenue, Manor Park, Essex, clerk; and L. K. Brown, 3 Basuto Road, Parson's Green, S.W., clerk.

Soured Milk Syndicate, LTD.—Capital 27,000*l.*, in 1*l.* shares. Objects: To carry on the business of milk-purveyors, food-specialists, etc., and to adopt an agreement with the London Pure Milk Association, Ltd. (vendors and promoters). The directors are J. Chaundler and J. Lamming, both of East Sheen. R.O., 26 Bush Lane, E.C.

H. O. DRUG CO., LTD. (P.C.).—Capital 500*l.*, in 1*l.* shares. Objects: To take over certain secret preparations known as the Edwards H. O. Ointment, and a headache-powder known as "Kapo," and to adopt an agreement with H. Edwards and G. S. Coakes, who are the first subscribers. R.O., 1 Market Place, Staplehurst Road, Lewisham, S.E.

STANDARD OXYGEN LIGHT AND POWER CO., LTD. (P.C.).—Capital 25,000*l.*, in 1*l.* shares. Objects: To take over as a going concern the interest of B. P. Maisel and the rights of a business of gas, electrical and general engineers, manufacturers of oxygen and other light and power machinery, general merchants, and importers, etc. R.O., 34 Mansell Street, Aldgate, E.

GEORGE CROFT, LTD. (P.C.).—Capital 300*l.*, in 1*l.* shares. Objects: To carry on in Grimsby and elsewhere the business of chemists, druggists, dysalsters, dealers in surgical appliances and druggists' sundries, etc. The first directors are H. N. Lunn, chemist's assistant; Florence C. Lunn (each with 149 shares); and J. Marshall, pharmaceutical chemist (two shares). R.O., 402 Victoria Street, Great Grimsby.

JOHN BULL FOODS, LTD. (P.C.).—Capital 70,000*l.*, in 69,500 cumulative preferred ordinary shares of 1*l.* each and 10,000 deferred ordinary shares of 1*s.* each. Objects: To carry on the business of manufacturers of and dealers in foodstuffs and medicinal, chemical, and other preparations, etc., and to adopt agreements (a) with Paine & Co., Ltd. (vendors); (b) with J. McNish; (c) with David Allen & Sons, Billposting, Ltd.; and (d) with J. W. Courtenay.

Company News.

T. H. SMITH, LTD.—The annual meeting was held at the Edinburgh offices on Friday, February 18, when the report and accounts, as given in our last issue (p. 283), were unanimously adopted.

UNITED ALKALI CO., LTD.—The directors have declared a dividend of 4*s.* each on the ordinary shares for 1909, placing 50,000*l.* to reserve and carrying forward about 60,000*l.* No dividend was paid on the ordinary shares in 1908.

BOVREL, LTD.—The annual general meeting was held at River Plate House, Finsbury Circus, London, E.C., on February 22, the Earl of Arran (chairman) presiding. The sales of bovril for the year had increased, the gross profit being some 5,000*l.* more than in the previous year, bringing the net profit to 122,576*l.* Trade in Australia and South Africa is hindered by heavy import duties, but the prospects are now brighter. The report was adopted with one dissentient.

A. MILLAR & CO., LTD.—The annual general meeting was held at 36 College Green, Dublin, on February 17, with Mr.

William Millar in the chair. The Chairman, in moving the adoption of the report, stated that the business of the company had been well maintained, notwithstanding the adverse Budget of 1909, and also that the new offices would be ready for occupation within two months. The net profit available, including balance from last year, was 10,375*l.*, out of which the usual interim dividends on the preference and ordinary shares were paid in July, which, with the final dividend now authorised, amount to 5 per cent. and 7 per cent. per annum on the preference and ordinary shares, leaving 2,588*l.* to carry forward. The reserve stands at 14,500*l.* The retiring directors and auditors were re-elected.

INTERNATIONAL SPONGE IMPORTERS, LTD.—The report of the year ended December 31, 1909, states that the net profit, after providing for all outgoings and depreciations, amounts to 17,568*l.* The preference dividend for the year absorbs 7,500*l.*, and it is proposed to pay a further dividend of 2½ per cent. upon the ordinary shares, making 5 per cent. for the year, and to carry 1,007*l.* to general reserve. Messrs. E. J. and A. G. Cresswell, since their retirement from the board, have continued to act as managers of the Red Lion Square branch, and have been paid a salary and commission. Certain agreements for services entered into by the present directors at the formation of the company to act also as managers expired in October 1908, and it is now proposed to ask the shareholders to pass a resolution altering the articles of association. For this purpose an extraordinary general meeting will be held immediately after the close of the general meeting, and the resolution will be subject to confirmation at a further meeting.

MORTGAGES AND CHARGES.—Particulars of the following have been filed at Somerset House: *Clayton Bottling Co., Ltd.* Debenture to secure 1,150*l.* and 7½ per cent. interest. Holders, J. J. Johns and H. B. Johns, both of Southampton.—*Edmonds (Ramsgate) Mineral Water Co., Ltd.* Particulars of 325*l.* 7 per cent. debentures.—*W. Oldaker, Ltd.* Debenture to secure 300*l.* Holder, Mrs. G. E. Hall, Gosforth.—*Harrington's Mineral Water Co., Ltd.* A memorandum of satisfaction in full on February 10 of mortgage debentures dated May 10, 1910, securing 500*l.*, has been filed.

Births.

BARGE.—At 35 Burleigh Park Road, Plymouth, on February 20, the wife of F. I. Barge, chemist and druggist, of a daughter.

KINLAY.—At Undercliffe, Sea Point, Cape Town, on January 29, the wife of H. J. Kinlay (of Heynes, Mathew & Co., Cape Town), of a son.

Marriages.

BENNETT—WARBURTON.—At Trinity Wesleyan Chapel, on February 16, by the Rev. S. A. Worrall, of Winchcombe, and the Rev. W. Marshman Spencer, Thomas Leigh Bennett, chemist and druggist, eldest son of Mr. George Bennett, chemist and druggist, Longshut Lane West, Stockport, to Ellen, youngest daughter of Mr. Charles Warburton, Wellington Road South, Stockport.

PARKE—LARGE.—At Rathfarnham Parish Church, Dublin, on February 16, by the Rev. J. Sandys Bird, M.A., David Wilkin Parke, L.P.S.L., son of the late Dr. Parke, of Derrygonnelly, co. Fermanagh, to Ethel Maude, eldest daughter of Mr. Thomas D. Large, Terenure, Dublin.

THE shop of Mr. George Robertson, chemist and druggist, Dufftown, was recently broken into and 24*l.* stolen.

MRS. CHARLES W. McLEAN, a daughter of the late Senator Fulford, of Brockville, who amassed some nine-million dollars by exploiting Pink Pills, died a short time ago after an operation for appendicitis, giving birth to a child on her deathbed. By the terms of the will the issue by marriage of this daughter was to succeed to one-third of the estate, and in the event of the child's death the money reverted to the parents. The child lived but two hours, and Mr. McLean thus inherits some three-million dollars.

Deaths.

ANDERSON.—At Creg Malon Hotel, Peel, I.O.M., on February 20, Agnes Anderson, widow of the late Mr. James Anderson, chemist, Musselburgh, and mother of Mr. D. S. Anderson, chemist, Leyland.

BENNETT.—At 38 High Street, Cheadle, Cheshire, on February 14, from pneumonia, Mr. Albert Edward Bennett, chemist and druggist, aged forty-six. Mr. Bennett was formerly in business at Tyldesley, and latterly resident at Bispham.

COURTENAY.—On February 15, Mr. Thomas William Courtenay, of Messrs. Fickus, Courtenay & Co., St. Dunstan's Buildings, London, E.C.

CRIPPS.—At 327 Cowley Road, Oxford, on February 14, Mr. Charles Cripps, chemist and druggist, aged seventy years. The deceased gentleman had suffered from paralysis during the past three years. He was apprenticed to the late Mr. Isaac West at 65 St. Giles's Street, Oxford, and eventually succeeded to the business, which he carried on for thirty-three years.

HANRAHAN.—At The Dispensary, Castle Street, Dublin, on February 18, Mr. Edward Francis Hanrahan, aged fifty-one. Mr. Hanrahan was registered as a pharmaceutical chemist in 1876, and afterwards (1893) took the medical degree of M.B., B.Ch., of the Royal University of Ireland, becoming in 1901 a Licentiate of the Apothecaries' Hall. He has been resident medical officer of No. 2 South City Dispensary District in Dublin, and was director and examiner to the Apothecaries' Hall. The funeral took place at Glasnevin Cemetery.

HARTLEY.—At Alsager, on February 9, Mr. William Henry Hartley, chemist and druggist, 13 Derby Street, Leek, aged sixty-nine.

HENDERSON.—At 28 Grosvenor Terrace, York, on February 17, Mr. Robert Henderson, of the staff of Messrs. Bleasdale, Ltd., wholesale druggists, York, aged seventy-one. The deceased gentleman was the oldest member of the staff, having been with the firm for fifty-seven years. During the whole of that time he had not been absent through illness. He was apprenticed to the firm which at that time was known as Butterfield & Clarke, and was afterwards drafted into the office and became cashier nearly forty years ago. On the occasion of his completion of fifty years' service he was presented with a pair of silver candlesticks.

JOHNSON.—Further particulars have been received regarding the death of Mr. Robert Wood Johnson, president of Messrs. Johnson & Johnson, New Brunswick, N.J. This illness began on January 31, when, on getting home from his office, he said to Mrs. Johnson that he had caught influenza. Next day was the annual meeting of his company, but he could not attend, and took to bed. He gradually grew worse and died on February 7 at his residence in College Avenue and Hamilton Street, New Brunswick, from heart failure. Mr. Johnson was born at Carbondale, Pa., on February 15, 1844, and received his early business training in a retail drug-store at Poughkeepsie, N.Y. Thence he went to New York City and became a drug broker, which avocation he followed until 1874, when he joined with the late Mr. George J. Seabury in founding the plaster-manufacturing business. When the partnership dissolved, Mr. Johnson in 1886 joined with his brothers James W. Johnson and Edward M. Johnson in establishing a small factory at New Brunswick, and in the following year the business was incorporated. Extensions of the



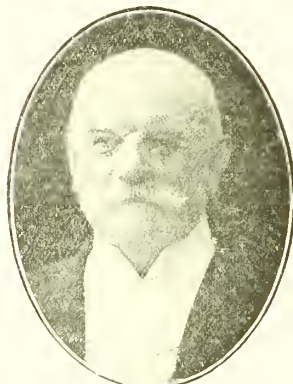
MR. R. W. JOHNSON.

until 1874, when he joined with the late Mr. George J. Seabury in founding the plaster-manufacturing business. When the partnership dissolved, Mr. Johnson in 1886 joined with his brothers James W. Johnson and Edward M. Johnson in establishing a small factory at New Brunswick, and in the following year the business was incorporated. Extensions of the

business have been frequent since, and New Brunswick is now known because Johnson & Johnson's works are there. Mr. Johnson was twice married, and is survived by his second wife, Mrs. Evangeline Armstrong Johnson, and four children, Mrs. R. C. Nicholas, daughter by his first wife, Robert Wood Johnson, jun., John Seward Johnson, and Evangeline Johnson. His brother, Mr. James W. Johnson, succeeds him in the presidency of the company.

LAYMAN.—At Thornton House, Bickley, on February 19, Mr. Charles Noel Layman, chemist and druggist, aged sixty-nine. Mr. Layman was a director of Wright,

Layman & Umney, Ltd., wholesale druggists and proprietors of Wright's coal-tar soap, and was to have presided at a meeting of the directors to be held on February 25. He was also a director of the Queen's Hotel, Margate, and attended a directors' meeting on February 16. His death took place suddenly, from heart failure, on Saturday morning, while he was drinking a saline draught, which it is thought distended the stomach and caused it to impede the action of a weak heart. Mr.



MR. LAYMAN.

Layman was very well known in the drug-trade, not only from his long experience as a drug-traveller, but also from the fact that he has attended for many years the British Pharmaceutical Conference, taking an active part in the social functions. His geniality also made him much in request, and he was generally the chairman of one of the smoking-concerts which form part of the yearly programme of the Conference. Mr. Layman was the son of a doctor, and was in business as a chemist at Tooting before the passing of the Pharmacy Act, 1868. Leaving the retail, he joined the late Mr. Sellars in establishing the firm of Sellars & Layman; Mr. Wright subsequently took over this business, Mr. Sellars retiring, and Mr. Charles Umney taking his place. Mr. Layman has thus been connected with the business of Wright, Layman & Umney from the commencement of the triumvirate whose names have become so familiar, and during that time he acted as traveller, only retiring from "the road" in 1905. In addition to his jovial bearing Mr. Layman was noted for the attention he paid to details, and the keen interest he took in the progress of the business. So recently as the day before his death Mr. J. C. Umney was arranging with him the details of the directors' meeting, at which he was to have presided, and Mr. Umney was able to inform him from the accounts that had just been closed that the business disclosed a record year's trading. Mr. Layman leaves a widow, four sons, and two daughters. Two of the sons, Mr. Ernest Layman and Mr. Fred. Layman, are directors of the company, although the former does not now take an active part in the management. The portrait given here-with is from a photograph taken by Mr. T. R. Williams, one of the company's town travellers.

LEAKE.—At Sherburn, on February 18, Mr. Thomas Whaplate Leake, pharmaceutical chemist, aged fifty-eight.

McINNES.—At Hopefield, Crief, on February 18, Mr. Andrew McInnes, pharmaceutical chemist, formerly of Ardrossan, aged sixty-seven.

OUGH.—At St. Wenna, Liskeard, Cornwall, on February 21, Mr. Lewis Ough, senior, chemist and druggist, aged seventy-five. Mr. Ough was for many years in business in Market Street, Liskeard, but retired in favour of his younger son, Mr. Thomas Ough. Another son is Mr. Lewis Ough, Ph.C., F.C.S., of Leicester.

THORNTON.—On February 18, from pneumonia, Mabel Thornton, daughter of Mr. L. B. Thornton, pharmacist, 115 Landor Road, Clapham, S.W., aged twenty-three. Miss Thornton had been associated with her father in the conduct of the business at Landor Road during the past five years.

Trade Notes.

THE BALSAMIC BRONCHIAL WAFERS made by Messrs. Raines & Co., York, will henceforth be sold as "Bronchial Wafers," for the reason which we have already explained.

GUIPSINE, the arterial hypertension remedy isolated from mistletoe by Dr. M. Leprince, is the subject of an interesting pamphlet, of which copies can be obtained from the English agent, Mr. Astor Boisselier, 13 and 14 Trinity Square, Tower Hill, London, E.C.

MR. CHARLES E. WOOD, 9 Mincing Lane, London, E.C., is the agent for a pure white olive-oil soap manufactured by Messrs. D. Lega & Co., Marseilles, and put up in generous cakes ready for retail. Mr. Wood also handles other olive-oil soaps, besides olive oil and starches.

MR. REGINALD W. BARKER, Vulcan House, 56 Ludgate Hill, London, E.C., has published a revised edition of his "Trade-mark Notes," in which he tells what marks may be registered, and how. Mr. Barker will send a copy of it to any C. & D. subscriber who applies to him for it.

P.A.T.A. PRICES.—The February additions to the projected list are as follows: Arak nail-paste, Bronnley's soap, Castols, Frame Food biscuits, Harrison's weed-killer, Lactoline preparations, Laurence's hair-dyes, Liquid Amorax, Lombio, and Mistole. The removals are: Carramon and Kendave Socks.

ORANGE QUININE WINE, B.P.—Messrs. Lorimer & Co., Ltd., Britannia Row, Islington, London, N., send us a sample of a new orange quinine wine which they are introducing to the trade. We find that the wine possesses the flavour of orange peel in a remarkable degree, and is of excellent colour. Particulars of this brand will be found in the company's advertisement in this issue.

THE "GRANBY" TRUCK-BASKET is the latest expression in parcel-carriers specially adapted for the drug-trade, wholesale or retail. The hand-truck combines great accommodation with lightness and strength. Full particulars regarding it and cycle-carriers can be obtained on application to the makers, Messrs. W. T. Ellmore & Son, Ltd., Thurmaston, Leicester, who also have depôts at 16 City Road, London, E.C.; 162 London Road, Manchester; and 103 Howard Street, Glasgow.

CHEMISTS' PACKETS are proverbially neat, but those who have to open them often complain of the sealing-wax used to secure them. An improvement is offered by Messrs. John Gosheron & Co., Byron House, Fleet Street, London, E.C., in their "Empire" sealing-machine. This is filled with gummed-paper tape in coils, and is illustrated in the firm's advertisement in this issue. The potentialities of the new method will be appreciated by our readers, who have the opportunity of a free trial of the machine.

WITH'S PLANT-FOOD.—Growing interest is shown by chemists in the sale of horticultural specialties, so as to conserve their business in poisonous preparations, and we have pleasure in calling their attention to the series of chemical fertilisers made by With's Manure Co., Hereford. These are compounded on well-established principles, and are known to gardeners (amateur and professional) for cleanliness in use and excellence of results. They are put up ready for handing out, incur no mess, and yield good profit. Those interested should ask the company for their handbill descriptive of the fertilisers, which shows at once the business possibilities of the products.

HORTICULTURAL-SUNDRIES LIST.—Messrs. Corry & Co., Ltd., 13 and 15 Finsbury Street, London, E.C., have published a new illustrated price-list of the goods which they handle as merchants and manufacturers of nurserymen's, seedsmen's, and florists' sundries and tobacco preparations. It extends to 84 quarto pages, and embraces everything required for gardening. It therefore comprises many things which chemists are not likely to stock, but also many which they should stock or be prepared to supply. It includes full lists of Messrs. Corry's insecticides and apparatus for using them. Those who do business in this line may obtain a copy of the list from Messrs. Corry on application. It is instructive as well as useful.

OL. AMYGD. PERSIC. DULC.—This product of Messrs. Stafford Allen & Sons' oil-mills, is made from apricot and peach kernels only, and is a remarkably pale, odourless, and tasteless oil, which is guaranteed to be pressed in London, and to be absolutely pure. Kernels of various rosaceous fruits other than the apricot and peach are commonly used on the Continent in the production of "peach-kernel oil" and "French almond oil," and this fact accounts for disappointments in compounding those formulæ in which "ol. amygd. persic." is prescribed. Messrs. Stafford Allen & Sons, Ltd., as the first pressers of the English oil, maintain the uniform quality of their product, and will be glad to furnish wholesale buyers with samples and quotations. Their address is 7 Cowper Street, London, E.C.

Business Changes.

Notes for this section must not be in the nature of advertisements, and they should be authenticated when sent to the Editor.

MR. P. BRUSSE, cinchona and drug commission agent, has removed to Prinsengracht No. 403, Amsterdam.

MR. B. BURRELL, Ph.C., has disposed of his business in Rustlings Road, Sheffield, to Mr. W. E. Coultas, of York.

MR. R. BRANDWOOD has taken over the Shear Brow Druggstores, carried on for many years by the late Mr. W. Prebble.

MESSRS. GUEST & EDWARDS, dispensing chemists, have purchased the business lately carried on by Mr. F. W. Burch, chemist and druggist, at The Pharmacy, Prestwich.

MR. FRANK HITCHCOCK, pharmacist, has taken over the Pharmacy at Greenhill Lane, Alfreton, until recently carried on by his father, Mr. James Hitchcock, who is retiring from business.

OWING to the increase in their business, the Viscose Development Co., Ltd., are removing to more commodious premises, and their address after March 1 will be 11 Queen Victoria Street, London, E.C.

MR. GEORGE BENNETT, F.S.M.C., chemist and druggist, has taken his son, Mr. T. Leigh Bennett, F.S.M.C., chemist and druggist, into partnership and the management of his old-established business at 19 Market Place, Stockport.

MR. JOHN RENNIE, chemist-optician, secretary to the North-East Lancashire Chemists' Association, has disposed of his business at Whalley Range, Blackburn, to Mr. J. E. Isherwood, chemist and druggist, Blackburn. Mr. Rennie's intention is to continue his profession in Cornwall, where he has previously had experience.

MESSRS. E. W. CARLING & Co., colonial merchants, St. Dunstan's Buildings, St. Dunstan's Hill, London, E.C., announce that the partnership between Mr. Edmund William Carling and Mr. Courtney Carling has been dissolved. The business will be carried on by Mr. Courtney Carling alone.

Recent Wills.

MR. SYDNEY GIBBS, Ph.C., Eastbourne, who died on November 23 last, aged forty-four years, left estate valued at 786l. 9s. 7d. gross.

MR. FREDERICK MILLWARD, chemist and druggist, manager for Boots Ltd., Above Bar, Southampton, who died on December 12 last, aged forty-three years, left estate valued at 105l. 10s.

MR. ALEXANDER GOVAN, retired chemist, Newport, Fife-shire, who died on October 1 last, aged eighty-four years, left personal estate in the United Kingdom valued at 6,829l. 6s. 4d., of which 5,367l. 10s. 4d. is in Scotland.

MR. OCTAVIUS CORDER, pharmaceutical chemist, Norwich, who died on January 5, aged eighty-two years, left estate of the gross value of 9,183l. 8s. 6d., of which the net personalty has been sworn at 3,246l. 4s. 3d. The testator left his residence and household effects at Bradestone for the use of his daughters Mary Margaret, Lucy, and Grace, 50l. to each of his sons and daughters, 20l. to his son-in-law Mr. William Augustus Thurgar, and his business interests at 31 London Street, Norwich, to his sons Edward and John Talvin in equal shares. The residue of his property he left to his daughters in equal shares.

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 obtainable at Money Order Offices for £1 and lodged with Mr. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

The figures in parentheses refer to the classes in which the marks are desired.

(From the "Trade-marks Journal," February 2, 1910.)

- "STOMO-TYN"; for non-medicated appliances (11). By C. M. Taylor, Meyrick Mansions, Hinton Road, Bourne-mouth. 319,019.
- "BIBERT"; for dental moulding (11). By A. Biber, 6 Kron-prinzenstrasse, Pforzheim. 319,304.
- "RELOH"; for photographic paper (39). By L. Gevaert & Co., Septestrasse 9, Vieux-Dieu les Anvers, Belgium. 318,553.
- "INTONA"; for photographic paper (39). By Ilford, Ltd., Roden Street, Ilford. 319,453.
- "VILAT"; for a milk-product (42). By A. Aladin, 66 Bishops-gate Street Within, London, E.C. 318,081.
- "THATZIT"; for grease-removing preparations (47). By I. Kelsey, Dashwood House, New Broad Street, London, E.C. 319,305.
- "CHAPPO"; for a toilet-preparation (48). By E. W. Sleath & Co., Teneriffe Street, Manchester. 318,881.
- "LEMOMEAL"; for a toilet-soap (48). By Yardley & Co., Ltd., Stratford, London, E. 318,991.
- "FORTE"; for perfumery, etc. (48). By John Knight, Ltd., Silvertown, London, E. 319,682.
- "FILBRITE"; for wood pulp (50). By Bratby & Hinchliffe, Ltd., Sandford Street, Ancoats, Manchester. 319,492.

(From the "Trade-marks Journal," February 9, 1910.)

- "DUKERON"; for paints, etc. (1). "PEROXIL" and "FER-TILOIDS"; for disinfectants and fertilisers (2). By Vanguard Manufacturing Co., 19 Dorrington Street, Leeds. 318,544, 318,745, 319,103.
- Caterpillar device, with wording "STRAWSON-SWIFT"; for arsenate of lead (2). By Strawsons & Co., 79 Queen Victoria Street, London, E.C. 310,008.
- "WELPOL"; for a medicinal veterinary preparation (2). By Krewel & Co., 33 Eifelstrasse, Cologne. 314,434.
- Device of lifebelt, lamp, anchor, etc.; for all goods (3). By Capt. W. A. Collings & Sons, Raymond House, Theobald's Road, London, W.C. 318,620.
- "PHYNOS"; for an embrocation (3). By W. Jones, North-umberland Street, Higher Broughton, Manchester. 318,986.

Device of mingled letters, "C F W & Co."; for medicinal chemicals (3). By C. F. Wearne & Co., 25-26 Lime Street, London, E.C. 318,729.

"INBURCO"; for medicinal preparations (3). By Indo Burma Co., Ltd., 108 Wool Exchange, Basinghall Street, London, E.C. 319,182.

"MUCOGENE"; for medicinal chemicals (3). By P. A. Astier, 45-47 Rue du Dr. Blanche, Paris. 319,194.

"CURDOIDS"; for medicinal chemicals (3). By T. Kerfoot, Oldham Road, Bardsley, near Ashton-under-Lyne. 319,286.

"PHENODA"; for medicated mouth-wash, tooth-paste, and soap (3). By James Woolley, Sons & Co., Ltd., Manchester. 319,455.

"RETLAW"; for a medicine (3). By W. G. Tozer, 130 Station Road, Wood Green, London, N. 319,818.

"PREFECT"; for all goods (42). By International Plasmon, Ltd., 66A Farringdon Street, London, E.C. 319,444.

"SHELL BRAND," and picture of same; for candles, night-lights, wax, etc. (47). By Asiatic Petroleum Co., Ltd., 24-28 St. Mary Axe, London, E.C. 318,733.

"FRISSON D'AMOUR"; for perfumery, etc. (48). By Erasmic Co., Ltd., Bank Quay, Warrington. 318,536.

"CŒUR DE JEANNETTE"; for perfumery, etc. (48). By G. C. C. Piesse, 28 South Molton Street, London, W. 319,291.

(From the "Trade-marks Journal," February 16, 1910.)

"MERRY WIDOW"; for straw-hat dyes, etc. (1). By J. M. Badcock, 73 St. John's Road, Waterloo, Liverpool. 319,548.

"A" in inverted triangle; for chlorate of potash (1). By Jonkopings och Vulcans Tandsticks Mfg. Co., Westra Storgatan, Jonkoping, Sweden. 319,751.

"SCALECIDE"; for chemicals (2). By Strawsons & Co., 79 Queen Victoria Street, London, E.C. 320,131.

"MARNUN"; for a medicated wash for bone-disease (3). By M. E. Numan, The Post Office, Ardfer, co. Kerry. 316,435.

"JE OVOL," and device of cod-fish in egg; for a medicinal preparation (3). By James Woolley, Sons & Co., Ltd., 12 Victoria Bridge Street, Salford. 318,395.

"OX VINO," and label device; for a medicated wine (3). By Kennaway & Co., Ltd., 3 Palace Gate, Exeter. 318,416.

"PIPS"; for medicinal pastilles (3). By C. E. Fulford, Ltd., 15 Greek Street, Leeds. 318,709.

"SPERAX"; for medicines (3). By M. Jones, 298 Harrow Road, London, W. 319,338.

"THERPINESE"; for a turpentine-substitute (4). By Rudd & Owen, Bowlalley Lane, Hull. 318,001.

Patent Specifications.

Printed copies of the following specifications are on sale (8d. each) at the Patent Office, 25, Southampton Buildings, London, W.C., a fortnight after the notice of acceptance has appeared in the "Official Journal." Persons desirous of opposing the grant of a patent must do so in the prescribed form within two months from the date of the "Journal" in which the notice appeared.

Specifications Accepted.

February 2, 1910.

SODIUM HYDROSULPHITE. 2521/09. Johnson. (Badische Anilin & Soda Fabrik).

PHOTOGRAPHIC CHEMICALS (Packeting). 6652/09. Kent and Oppenheimer, Son & Co.

INVALIDS' PORTABLE SELF-RAISER. 5726/09. Carr. COLLAR STUD (Curative). 8238/09. Alldridge.

CAPSULES (Pleated Paper). 11220/09. Freeman.

ROTARY COMPRESSORS. 11837/09. Warwick Mfg. Co. (1908) and Alquist.

FLY-CATCHING APPARATUS. 13752/09. Finch.

TRINITROTOLUENE (1. 2. 4. 6), PURIFICATION OF. 18281/09. Vender.

February 9, 1910.

COLOUR-PHOTOGRAPHY (Carbon Tissues for). 23,273/08. Clifton & Wells.

TIN OXIDE (Manufacture of Pure). 28565/08. Jensen (Spitz).

PHOSPHORIC ACID (Converting Tri-basic into Salts of Pyrophosphoric Acid). 2109/09. Grana.

SHEEP-DIPPING APPARATUS. 2661/09. Waugh.

HYPODERMIC SYRINGE. 4207/09. Ball.

EAR-DRUM (Massaging). 13659/09. Jacobsthal & Fischer.

OXYGEN AND NITROGEN COMPOUNDS (Electric Means). 16224/09. Bernet & Badin.

GUAIACOL COMPOUNDS. 19805/09. F. Hoffman-La Roche & Co.

PHIALS, ETC. (Receptacles for). 25816/09. Wetter (F. Hoffmann-La Roche & Co.).

February 16, 1910.

SULPHUR-RECOVERY. 3061/09. Feld.

PALM-OIL EXTRACTION. 3357/09. Eglen (Esuman-Gwira).

PHENOLESTERS. 8069/09. Raschig.

February 23, 1910.

SURGICAL DRESSINGS (Sterilisation of). 3505/09. Marshall.

NITROGEN OXIDES (Absorption of). 10465/09. Johnson (Badische Anilin & Soda Fabrik).

SHEEP FOOT-BATH. 11661/10. Wilmot.

GLASS MEASURES FOR DARK-ROOMS. 14331/09. Joseph.

ALKALINE SOLVENTS. 14725/09. Nauton.

SANITARY TOWELS. 18629/09. Siffleet.

SULPHURIC ANHYDRIDE. 23419/09. Eschellmann Harmuth

& Ges. der Tentekewschen Ch. Fabrik.

SUBSTANCES FOR LOCAL IMMUNISATION OF DISEASED TISSUES.

25675/09. Wassermann.

Specifications Open to Public.

BARIUM CARBONATE (Purification). 30339/09. Soc. Anon. pour l'Utilisation de l'air et ses Dérivés.

OXYGEN BATHS (Preparing). 125/10 and 1458/10. Max Elb Ges.

PYROPHORIC METALLIC SUBSTANCES. 16211/09. Kunheim & Co.

OILS (Thickening). 16665/09. Genthe.

DECAYED TEETH (Treating). 2100/10. Bonnet.

POLYCHROME SURFACES FOR PHOTOGRAPHY. 29273/09.

Lumière

NEW CHEMICAL COMPOUNDS. 3083/10. Chem. Fab. von Heyden A. G.

Personalities.

Notes for this section must not be in the nature of advertisements, and they should be authenticated when sent to the Editor.

MR. D. HOOVER, of Calcutta, has been elected a Fellow of the Asiatic Society of Bengal.

MR. SAMUEL SCRUTTON, J.P., of Messrs. Raimes & Co., York, has been re-elected an auditor for the borough.

MR. J. FILLINGHAM, Ph.C., Westgate, Grantham, has been elected President of the local Traders' Association.

MR. W. H. WANDLESS, chemist and druggist, Whitehaven, has been re-elected a member of Cumberland County Council.

MR. A. B. BARKER, chemist and druggist, Market Place, Heckmondwike, has been appointed a Vice-President of the Heckmondwike Tradesmen's Association.

MR. W. H. HOBBS, of 5 Trinity Square, E.C., has been ordered to take a sea voyage, and sails by the s.s. *Morea* on February 25 for Australia, calling at Colombo.

MR. T. MABEN, F.R.S.M., delivered a lecture, illustrated by lime-light views, on "Some Curiosities of Medicine," on Monday evening last, in the hall of Emanuel Church, Dulwich.

MR. C. J. PARK, pharmaceutical chemist, 23 Mutley Plain, Plymouth, has been elected a member of the committee of the local branch of the London Association for the Protection of Trade.

MR. R. B. G. ROSE, of Gympie, Queensland, who, with Mrs. Rose, has been visiting England and the Continent of Europe, has sailed for Australia. Mr. Rose has quite recovered from his threatening eye-trouble.

MR. A. BERLINER, of Worship Street, E.C., has been re-elected an Estates Governor of Dulwich College by St. Luke's, Finsbury. Mr. Berliner was formerly a member of the Vestry and of the Finsbury Borough Council.

MR. CHARLES NOSWORTHY ROWE, assistant sanitary inspector to the Newton Abbot Rural District Council, and son of Mr. Frank Rowe, chemist, Starcross, has passed the examinations of Royal Sanitary Institute for Inspector of Nuisances, held at Plymouth last January.

MR. WILLIAM BRADBURY ROBINSON, of Messrs. Robinson & Sons, Ltd., Wheatbridge Mills, Chesterfield, celebrated his eighty-fourth birthday on February 15, and the "Derbyshire Courier" of February 19 published an interesting biographical sketch of Mr. Robinson. We gave some particulars of the foundation of the business in our Jubilee issue, when we recalled the fact that Robinson & Sons had advertised lint and willow and paper pill-boxes in the first issue of the *C. & D.* Mr. Robinson was born on February 15, 1826, being the son of Mr. J. B. Robinson, chemist, 3 Packers Row, Chesterfield, whose pharmacy is at present occupied by Mr. Robert Poole Roe, chemist and druggist. In 1839 Mr.



MR. W. B. ROBINSON.

Robinson left school, and in the same year his father acquired a pill-box making business at Wheatbridge Mills, which was the nucleus of the present extensive concern. When in 1854 Mr. J. B. Robinson bought a lint business, he took his son into partnership, and the son's inventive genius was turned to making better machinery than the first machine (which they had bought for 27s. 6d.), and from that time the business has not looked back. Mr. Robinson was elected a member of the Chesterfield Town Council in 1872, and worked upon it and other local bodies until 1904, when he retired, having in the meantime been appointed an alderman, and he served his town as Mayor in 1893 and 1894. He retired from public life in November 1904, and has since been living in quiet seclusion, "but," says the "Courier," "on fine days last week he was seen out of doors, and it is certain that Chesterfield has no citizen for whom 'the man in the street' has

a greater admiration and respect." The sketch portrait which we give here is from a photograph reproduced in the "Courier."

MR. W. F. SMITH, retired chemist, who for many years carried on business at Abingdon, Berks, has given 1,000*l.* to be invested to augment the income of the Abingdon Cottage Hospital. Some time ago Mr. Smith gave 1,000*l.* to the endowment of the Oak Street Almshouse and 1,000*l.* to the augmentation of the Vicarage.

MR. WALTER WALWIN, chemist, Gloucester, is chairman of the directors of the Phoenix Radial Rotary Motor Co., Ltd. The "Gloucestershire Chronicle" of February 19 printed a double-column illustrated article on this new Gloucester industry, and one of the illustrations shows Colonel Cody and Mr. Walwin outside the company's works in Quay Street.

MR. THOMAS BEECHAM, who by his production of Strauss's "Elektra" at Covent Garden Theatre last Saturday evening has stepped into the front rank of musical conductors, is the eldest son of Mr. Joseph Beecham, J.P., of St. Helens, who himself is no mean musician, and has encouraged his gifted son in his musical studies. Mr. Thomas Beecham is thirty-one years of age, and was educated at Rossall and Oxford University.

SIR T. EDWARD THORPE, F.R.S., was on February 15 presented with a silver tea-and-coffee service and a cigarette-box by his past and present colleagues at the Government Laboratories, the Inland Revenue, and the Board of Agriculture. The presentation was made at the Government Laboratories, Clement's Inn Passage, by Sir George Murray, Permanent Secretary to the Treasury, the gift being on the occasion of the retirement of Sir Edward from the directorship of the Laboratories.

THE NAME of Mr. Richard Hayton Davis, Ph.C., Harrogate, is probably as familiar to many of our readers as it is to ourselves. He has recently retired from business in Harrogate, after fifty-one years there, but he looks back upon sixty-three years in pharmacy. Mr. Davis served his apprenticeship from 1847 to 1853 at Kendal, and at the end of it came to London for two months' work in the laboratories of the School of Pharmacy. He passed the Major examination in July 1853. Mr. Davis married a niece of Michael Faraday, to whom he was related. While in London he was asked by Faraday if he had ever analysed the Harrogate waters, and this led to important results for Mr. Davis, whose name is closely identified with that subject. He held situations in London and the provinces before settling down at Harrogate, and was with Messrs. Mawson & Swan, Mosley Street, Newcastle-on-Tyne, at the same time as Sir Thomas Barclay. Many changes have, of course, taken place in pharmacy since Mr. Davis commenced business. In those early days, he tells us, errand boys were superfluities. The sweeping of the shop and cleaning of the windows devolved upon the junior. Changing the water in the leech-jar, and using the big pestle and mortar, were daily duties for apprentices and assistants. Proprietary goods were comparatively few, and glycerin and boric acid were unknown as articles of commerce. Mr. Davis has well earned a leisured retirement, and all who knew him will join with us in wishing him happy years to come at 16 Tervit Well Avenue, Harrogate.



MR. R. H. DAVIS.

THREAD WORMS.—The internal administration of sulphur has been productive of excellent results, and should be given a trial before resorting to the inconvenient and often inefficiently given injections.—*The Hospital.*

Pharmaceutical Society of Great Britain.

NORTH BRITISH BRANCH.

AN evening meeting was held at 36 York Place, Edinburgh, on February 16, Mr. J. P. Gilmour in the chair. The first paper was on

PHARMACEUTICAL PREPARATIONS OF SWEET ORANGE.

In this Mr. PETER BOA, Ph.C., described preparations of sweet orange corresponding to those of bitter-orange peel recognised by the British Pharmacopœia, as follows:

TINCTURE OF SWEET-ORANGE PEEL.

Fresh sweet-orange peel, cut	
small	20 or 25 oz.
Alcohol (90-per-cent.)	52 fl. oz.
Distilled water	43 fl. oz.

Prepare by the maceration process.

He considered 20 oz. of peel sufficient, but he gave 25 oz. as an alternative. With good peel the tincture is practically saturated with 4 oz. to a pint of menstruum.

SYRUP OF SWEET ORANGE.

Tincture of sweet orange (as above)	1 fl. oz.
Syrup	7 fl. oz.

Mix.

ACID SYRUP OF SWEET ORANGE.

Citric acid	2 oz.
Sugar	5½ lb.
Distilled water	42 fl. oz. or a sufficiency
Tincture of sweet orange	5 fl. oz.

Heat the water to boiling-point, add first the sugar, then the citric acid. When cold, add the tincture and mix by shaking. Finally add sufficient distilled water to make the product measure 100 fl. oz.

AROMATIC SYRUP.

Fresh sweet-orange peel, cut	
small	12½ oz.
Alcohol (90-per-cent.)	52 fl. oz.
Cinnamon-water	43 oz.

Prepare a tincture by the maceration process, filter, and add an equal volume of syrup.

Specimens of the preparations were exhibited.

DISCUSSION.

Mr. W. DUNCAN expressed some hesitation in discussing suggestions on questions relating to flavouring-agents, on which Mr. Boa was recognised as a perfect master. He recollected that Christison had stated that the flavouring of the sweet orange was preferable to that of the bitter orange, but it was better to combine the tonic properties of the latter with the flavour. He hoped the present tincture would be omitted from the Pharmacopœia if Mr. Boa's suggestion was adopted; otherwise, to have the two syrups would inevitably give trouble to dispensers on account of the way in which the different syrups would be ordered by prescribers, with consequent difficulties in regard to incompatibilities.

Mr. C. F. HENRY and Mr. McCUTCHEON asked questions.

Mr. E. ROWLAND stated that glycerin, in his experience, is a good solvent for the aromatic constituents of orange-peel. For some time he had been using a tincture of sweet orange made with glycerin instead of alcohol, and it served the purpose equally well. He found the tincture of sweet orange a very acceptable flavouring-agent.

Mr. D. McEWAN remarked that syrup of orange makes a very unsightly mixture, and does not please the public taste. He would prefer that they should adopt a preparation like liquor aaranthi dulcis, which gives a nice colour and is not incompatible with acid and alkaline mixtures. He quite agreed with Mr. Boa that there is no necessity for having a flavouring combined with bitters.

Mr. J. R. HILL suggested that they should use essential oil for making suitable preparations. That would get rid of one of the incompatibilities and overcome the objection of having a mixture darkened by the tannin bodies they had in the peel. He added that there are many much finer bitters than bitter orange.

Mr. BOA, replying to Mr. Duncan's remarks, said he was not before aware that Christison preferred sweet orange to bitter orange as a flavouring-agent. Mr. Duncan seemed to be rather afraid of having two syrups in the Pharmacopœia. He had not made any suggestions as to that. He would be inclined to leave the selection of that to the Pharmacopœia Committee. Replying to Mr. Henry, he remarked that last year he did not say anything against bitter orange, but against the way in which it is treated in the Pharmacopœia. The sweet-orange preparations keep indefinitely. After the B.P. syrup of orange has been made for about three weeks or a month it gets very rank, strong-tasted, and disagreeable. This he thought to be due to separation and oxidation of the terpene of the essential oil, which practically becomes turpentine. The answer to Mr. McCutcheon's suggestion was simply that they could not get the full flavour out of the peel by boiling it. Replying to Mr. McEwan's, he said the syrups mix clear with water. They do not give much coloration, so that they are quite serviceable in that way. He did not think Mr. Hill had ever made a preparation from oil alone, or he would not have committed himself to ask that question. The syrup made from oil alone is the most soulless preparation one could imagine. There is not a bit of flavour in it. The only use of the oil is to fortify a tincture deficient in flavour, but unless such tincture is used directly it is liable to contain traces of oxidised oil.

The CHAIRMAN said the intrinsic merit of Mr. Boa's first paper appealed so much to his scientific imagination that he had looked forward to every subsequent communication by him. He felt he was a man like Socrates, only a long way off. Socrates brought philosophy from heaven to earth, and Mr. Boa brought pharmaceutical matters from the higher academic regions down to the market-place of every-day experience.

Mr. EDWARD J. BROWN, Ph.C., then read a note on the

PRESERVATION OF SULPHUROUS ACID BY GLYCERIN.

He pointed out the instability of sulphurous acid, and said he had found it difficult to obtain a sample which conformed to the official standard. A 5-per-cent. solution in a partially filled bottle, if frequently opened, may lose 50 per cent. in the course of a week, partly from volatilisation and partly from oxidation. Loss from volatilisation can be reduced by proper storage, but loss from oxidation is not so easily controlled. Oxidation is directly proportional to the volume of air present, which volume is constantly increasing as the bottle is emptied. From its physical and chemical characters sulphurous acid is evidently both a solution of H_2SO_3 and a solution of SO_2 . Its acidity and electrical conductivity prove the presence of the former, while the fact that the solution at elevated temperatures conforms to Henry's Law indicates that part of the anhydride (at normal temperature and pressure at least) must be present as SO_2 . The acid may thus be regarded as sulphur dioxide *plus* water, which gets slowly converted by the oxygen of the air into sulphuric acid. Alcohol, glycerin, and other organic bodies have been suggested as retarders or preservatives. He described an experiment in which a sample of sulphurous acid (A) was taken which contained 3.8 per cent. SO_2 . To another portion (B) was added 5 per cent. glycerin, which then gave 3.6 per cent. SO_2 . They were stored in stoppered bottles three-fourths filled, set in similar positions, and occasionally opened. At the end of twelve months the results of estimation showed A=1.5 per cent. SO_2 , and B=3.1 per cent. SO_2 . This indicates that the addition of glycerin exerts a marked preservative effect, and, as it diminishes the velocity of the reaction, it acts as a negative catalyst. With reference to experiments carried out on the volumetric estimation of the acid and its alkali salts, he said that to overcome the error liable to occur in the titration of acid by reason of the oxidising influence resulting from the necessary great dilution with water and exposure to the air, it is usual to add the acid to excess of standard iodine solution, allow it to stand for some time, and then titrate back with standard thiosulphate solution. But if a small quantity of glycerin be added to the boiled and cooled water it is found that direct titration with iodine gives as accurate results. The same with sodium sulphite. If the salt be dissolved in boiled and cooled water containing added glycerin, direct titration

with the iodine can be carried out. He hesitated to suggest the advisability of adding a preservative to sulphurous acid, but if such be decided on glycerin evidently is as suitable as any.

Mr. Brown stated that since his paper was announced a sample of sulphurous acid sent by Mr. Thomas Dunlop, Ph.C., Glasgow, which had been quite bright when taken into stock, was stored in an actinic-green stoppered bottle, when a deposit of small white acicular crystals slowly formed in it. These proved to be a mixture of calcium sulphite and calcium sulphate. Mr. Brown could not account for this, but added that calcium sulphite is the most soluble of the alkaline earth sulphites, and especially so in excess of sulphurous acid. As the sulphurous acid falls in strength there is a slow deposition of the normal sulphite and the product of its oxidation, the less soluble calcium sulphate.

Messrs. Boa, Forret, E. Rowland, Duncan, and Hill spoke briefly, and Mr. Brown, in reply, said both the bottles were securely stoppered and luted over, so that he did not think the loss was due to volatilisation as suggested by Mr. Forret. They were also opened under the same conditions, so that mere lubrication would not account for the results. He agreed with Mr. Rowland that hydroquinone would act as a preservative, and for the same reason as glycerin. The glycerin acts, he explained, as a negative catalyser. There are positive catalysts—namely, those that hasten the velocity of a reaction, such as platinum in the union of sulphur dioxide and oxygen, to which may be added other apparently inert bodies, such as water, oxides of nitrogen, ferric oxide, and the like. Glycerin here may be compared to what are technically called "contact poisons," which are the cause of so much trouble in the "contact" process for sulphuric acid. One per cent. of arsenic in the platinum is sufficient to prevent combination between the gases. The action of such catalysts would appear to be in the ratio of their thermal conductivity. The "poisons" may also prevent the formation of a galvanic chain—that is to say, the glycerin may prevent the formation of a galvanic chain between the oxygen of the supernatant air and the sulphurous acid. The heat of formation of the higher oxide is thus hindered from passing off as electricity. Such polarisation currents occur frequently in the combination of chemical substances.

Mr. J. R. HILL, Ph.C., then read a paper on

PUSCH'S PURITY TEST FOR CITRIC ACID.

It is twenty-six years since this test for the detection of tartaric acid in citric acid was described by Herr Pusch,

Action of Sulphuric Acid on Citric Acid Samples at 98° C.

Minutes	Percentage of Tartaric Acid						Pure Acid
	5	1	0.5	0.1	0.01	0.001 to 0.0001	
3	brown tinted deep brown finished black opaque SO ₂ abundant	tinted	tinted	tinted	tinted		lemon yellow
5							
10							
15							
20							
25		deep brown SO ₂ evolved	brown SO ₂ evolved finished	brownish	tinted		colour deepened
30			deep red brown	brown finished	brownish		
				reddish brown	light brown finished		
						brownish yellow	brownish tint

but it has not received the attention or been so generally adopted as it deserves to be. It has, however, been recognised in the German, Japanese, and Swiss Pharmacopœias. Mr. Hill explained his mode of operating as follows:

The most convenient plan is to place the 0.5 gram of the sample in a 6 by $\frac{3}{4}$ in. test-tube and pour upon it the 5 c.c. of sulphuric acid. The tube is suspended in a water-bath which is kept boiling steadily at 98° C.

The large tube is necessary owing to frothing, and it should be cleansed, prior to use, with strong sulphuric acid. The quantity of sulphuric acid named in some Pharmacopœias (10 c.c.) is needlessly large, and the above-mentioned quantities were used in all the experiments. Pure citric acid dissolves with vigorous effervescence to form a yellow solution, which does not, as Pusch alleges, remain unchanged at the end of one hour. The appended table gives the colour-changes during varying periods with the test conducted on pure citric acid and also on the same acid containing varying proportions of tartaric acid. Thus a regular gradation of tints is discernible, and even after thirty minutes' heating the pure citric-acid sample gave a brownish tint only recognisable in a good light. On heating for a further forty minutes there is a consistent gradual deepening in all the colours. The results show that the test responds to 1 part in 10,000 if a control experiment be conducted. Pusch immersed the test-tube in cold water which was rapidly raised to boiling-point and maintained at that temperature for an hour. Following this method strictly, Mr. Hill found that the hour's boiling may be omitted if more than 0.5 per cent. of adulteration is sought for.

The communication was briefly discussed by Messrs. W. DUNCAN, BROWN, and TAIT, the first-named confirming Mr. Hill's observation that the test detects 0.5 per cent. of tartaric acid, which is "sufficient for practical purposes." Mr. HILL replied, and directed attention to specimens of

SOYA BEANS,

which he had received from Mr. John Blyth, Leith. They are imported from Vladivostock. The sample consisted chiefly of yellowish-white leguminous seeds, but some of them were black, brown, green, and red. Mr. Hill referred to the recent action for damages (*C. & D.*, February 12, p. 247) arising from soya-bean meal, in which there had been a conflict of evidence among expert witnesses as to the cyanogenetic properties of the meal. He (Mr. Hill), after a critical test capable of detecting 1 part of prussic acid in 1,000,000, obtained entirely negative results, and therefore it appeared that the beans did not contain a cyanogenetic glucoside yielding prussic acid with water.

Agri-Horticultural Licences.

(Poisons and Pharmacy Act, Sec. 2.)

Notice of Application.

KENT.—H. Crowhurst and P. H. Tompsett, grocers, Marden.

Application Granted.

WORCESTER.—The Corporation Watch Committee has decided to grant the application of Mr. J. Wall, seedsman, Broad Street.

Objections.

LINCOLNSHIRE.—The Stamford chemists have objected to Kesteven County Council renewing the licence held by W. & J. Brown, as full facilities for obtaining poisons existed within a stone's-throw of the firm's premises. The objection came to hand after the committee had decided to renew the licence.

RAMSGATE.—The local chemists have petitioned the Town Council not to grant application of a local florist. It is pointed out that there is a chemist's establishment within a few yards of the applicant's place of business.

Other Matters.

FAVERSHAM.—Councillor E. Jenkins, chemist and druggist, has given notice to move, at the next meeting of the Town Council, that the sanitary inspector shall be appointed inspector under the Poisons and Pharmacy Act, at a fee of 12. 1s. per annum (*C. & D.*, February 19, p. 280).

BATH.—The recent action of the City Council in refusing the renewal of poison-licences was the main topic at the after-dinner speeches at the annual dinner of the Bath Gardeners' Mutual Improvement Association. Mr. Coombs said the refusal was very hard upon them, the Act being passed to legalise "what seedsmen have hitherto been doing unlawfully." The Chairman said he felt that nurserymen were "quite as capable of dispensing various so-called poisons as some of the chemists." Mr. Cooling said he believed it quite as possible "for the chemists of Bath to poison the whole of the gardeners of Bath and other places as it was for the nurserymen and seedmen to do so."

INFORMATION DEPARTMENT



The object of this department is to supply our subscribers with the names and addresses of manufacturers and agents, or other business information which they may be in need of. Inquiries should be sent by post, addressed to the "Information Department of 'The Chemist and Druggist,' 42 Cannon Street, London, E.C."

Inquiries in regard to dispensing, legal, practical, technical, or other pharmaceutical subjects should be addressed to The Editor, who will reply to them in the Correspondence Columns.

Information Wanted.

We would be obliged if readers would reply, by postcard or otherwise, to any of the subjoined inquiries. Replies should be addressed to the "Information Department of 'The Chemist and Druggist,' 42 Cannon Street, London, E.C."

- 86/34. Makers of or agents for "Black's Food."
- 84/27. "Moonsced Ointment": proprietors or agents.
- 86/9. "Dr. Lahmann's Vegetable Milk": maker or agent.
- 87/44. Where can "Thompson's Lung Expander" be obtained?
- 84/24. Makers of "Naitvie's Digestive," or where obtainable?
- 87/54. "Kelsey plasters for seasickness": where obtainable?
- 83/17. "Pearson's Sand Soap": who makes or where obtainable?
- 81/16. Makers of a special smoke-paper for drain-testing purposes.
- 87/43. Who supplies "Epitome," a skin-food, said to be of American origin?
- 83/38. "Carmelite Essence, Amol": who are the proprietors and where can it be obtained?
- 84/27. "Vacoelum" compound for lubricating purposes: who makes or where obtainable?
- 82/57. Where can a French preparation called "Redo" (believed to be a calcium-hydrosulphide mixture) be obtained?
- 85/73. Makers of a circular bed-warmer, metal, filled with chemical crystals and marked "A N" (or "N A") patent.
- 85/74. Who makes or supplies a body belt with heating apparatus (believed to contain a chemical), for use in cold climates?

Information Supplied.

In reply to inquiries, information has been sent during the past week to subscribers and others by our Information Department in regard to the following subjects. The information will be repeated to any others requiring it who send a stamped and addressed envelope for the purpose to the Information Department as above.

- Automatic soap dispensers, supply (78/15).
- Bailey's rubber brushes, makers (81/6).
- Barff's boro-glyceride, supply (83/23).
- Bengue's Analgesie balsam, makers (79/23).
- Bird foods, makers (81/39).
- Bower Bros. (printers), address (78/63).
- Bromides, makers (83/73).
- Caustic soda, manufacturers (84/19).
- Celaundino corn-cure, makers (86/8).
- Chloralamid, makers and agents (82/23).
- Coza powder, makers (86/11).
- Crosby's vitalised phosphites, makers and suppliers (80/25).
- Don Confectionery Co., address (81/15).
- Freck's tablet machine, agents (86/8).
- Gayetty's medicated paper, maker and agents (83/22).
- Iodides, makers (83/73).
- Lactoline soap, makers (83/18).
- Lacto-maltine, makers (83/23).
- Lozenge - making machinery, makers (82/42).
- "Lyon's Precious Ointment," proprietor (81/9).
- Malted food, packers (84/34).
- "Moonsced" anti-obesity cure, maker (84/27).
- Olive oil for use in roll tobacco manufacture, supply (83/45).
- Poison-vendors, list (82/38).
- Radium bank, address (85/7).
- Reuter's toilet soap, supply (81/18).
- St. Winefride soap, makers (79/56).
- Schering's agents (79/57).
- Shallots, wholesale supply (86/18).
- Soda ash, manufacturers (84/19).
- "Sorbecafacin," makers and agents (83/11).
- Sphagnum moss, supply (84/1).
- "Terraline," makers and agents (84/28).
- Tiling for pharmacies, supply (77/70).
- "Valisan," makers and agents (78/23).
- "W" brand bottles, makers (73/34).
- Zoelia bath soap, supply (85/57).

Observations and Reflections.

By Xrayser II.

The Absurdities of Patent-medicine Law

are too many to be dealt with adequately in a brief note, but the recent decision to penalise "balsamic" demands a passing comment. The only thing to be said for it is that it is consistent with the initial magisterial absurdity of making "balsam" itself dutiable. Few words used in medicine have a wider connotation than this. Originally the name of an aromatic vegetable juice of no particular medicinal value, it may now signify almost anything that is soft or sweet or soothing, and when unqualified it conveys no definite meaning to anybody. Used alone, neither "balm" nor "balsam" indicates a remedy for any specific complaint; and it is therefore as arbitrary an exercise of authority to tax them as it would be to tax "mixture," which, presumably, is meant to indicate a remedy for something. And the adjective 'balsamic' is, if possible, still less definite than its substantive. In general use its most frequent meanings are perhaps fragrant, restorative, health-giving, and its nearest synonym is "balmy" (compare Milton's "balmy spoils" with Longfellow's "balsamic exhalations of the pine"). In medicine it indicates at most, and in the most general way, something remedial, softening, soothing; and therefore, as applied to bronchial wafers, it means virtually just nothing at all, for obviously the wafers are offered only because they possess these qualities: "bronchial," in short, here means good for bronchial affections. The absurdity of taxing "balsamic" is seen if we substitute "soothing" for it. Arguing from other cases, "soothing lozenges" would be allowed, and "throat-lozenges" actually is allowed, but "soothing throat-lozenges" is forbidden. Such juggling with words as this is ridiculous; and the only result of thus interpreting an Act of Parliament is to annoy those who are subject to it, and to bring the law into contempt.

"Research Chemists"

of the class now being turned out in large numbers by our universities and colleges, bearing the hall-mark "B.Sc.," are as thick as blackberries, and many of them just about as useless. The average B.Sc. is in a most anomalous and unenviable position. Notwithstanding his high education, his thorough training in methods of chemical manipulation, and his expertness as an analyst, the moment he attempts to find a sphere in which to exercise his talents he is chivvied about from pillar to post in the most undignified manner. He is warned off public appointments because he is not inside the Institute ring fence; he applies to a public analyst for a position, and he will be allowed the honour of working for a couple of years without a salary or for only the barest honorarium; he goes to the manufacturing chemist only to find the positions filled by men who have been well trained in the manufacturer's own laboratory, and his lack of experience in pharmacy or of business training discount his value to the pharmaceutical manufacturer. Thus practically every avenue is closed. No wonder the University of London has opened a bureau for unemployed chemists! Whether the "Times" correspondence, referred to in the *C. & D.* last week, will help this unfortunate class of men remains to be seen, but I am not convinced that matters are much better in Germany, so far as young graduates are concerned. We seldom hear about the hundreds of such men who are in employment in Germany at a mere pittance. It is the bright particular stars of Germany's industrial firmament that flash across our horizon—the men who know chemistry and its allied sciences from A to Z, and who have proved themselves equal to the solution of the problems of their occupation. They are hall-marked by Nature as well as by a university, and there are not too many of that type in any country.

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Editorial Articles.

"Pharmacy."

Mr. J. R. Young has revisited Stoke-on-Trent, where, as President of the Pharmaceutical Society, he announced a year ago that "the Pharmaceutical Council would do its utmost to take care that the use of the word 'pharmacy' was restricted to the individual who happened to be a pharmacist." He returned to the subject at Stoke last week, although in the interval "the utmost" that the Council have done has been to demonstrate that the law upon which they relied did not warrant their pretensions. Mr. Young is not wanting in courage, otherwise he would have been silent on this subject last week, when he had no consolation to give his hearers. Judging from Mr. Idris's recent utterance, if Mr. Young had been as courageous when the Poisons and Pharmacy Bill was in Parliament some restriction upon the use of the word would have been embodied in the Act. The opportunity to do so was deliberately avoided, and sequentially it was attempted to get judges to regard a provision of the 1852 Act as they had done a similar provision in the Dentists Act, especially in the decision of *Barnes v. Brown*.

We confess that we have never been able to appreciate the analogy, especially as there was a prior decision under the Dentists Act, which ruled that place names, such as "dental office," are not covered by the Dentists Act. That case (*Emslie v. Paterson*) was decided by the Justiciary Appeal Court of Scotland in 1897, and has always been respected as regards place names. The decision in *Barnes v. Brown* was on the point of personal qualification. The Court did not deny that a person who is not a registered dentist may extract teeth, and may say so, but it ruled that when such a person says he can extract teeth painlessly he claims special personal qualification, seeing that it is a notorious fact that extraction of teeth is a painful operation. The connection between that decision and the use of the description "pharmacy" by persons who are not pharmacists is remote, while "dental office" and "pharmacy" are as near each other as two different Acts permit; hence we think the "pharmacy" decision was the logical sequel to *Emslie v. Paterson*, rather than, as Mr. Young said, the logical sequel to *Bellerby v. Heyworth*. The latter was a partnership case, which had followed on the *Barnes v. Brown* decision, and the Court of Appeal preferred the principle laid down in *Emslie v. Paterson*—viz., that Section 3 of the Dentists Act is directed to the personal description of a man as distinguished from the description of the work he does—or the place he does it in. This has recently been followed also by the Irish High Court, and it is now abundantly clear that it was a mistake to exchange the opportunity of legislating on the word "pharmacy" for the chance of extracting a long unexercised power from the 1852 Act. That is the gravamen of the case, and the one which Mr. Young and other members of the Pharmaceutical Council have in these latter days avoided. It will be noticed that Mr. Young holds out hope of legislation. There will be "a speedy and successful deliverance" if certain circumstances can be marshalled together. We are not convinced that the best policy for pharmacists is to wait until doctors, dentists, lawyers, and veterinary surgeons toe the line, for these bodies have much greater powers than we have, and consequently greater protection. "It is a public matter, and a national matter," said Mr. Young, "that professional qualifications involving technical training and examinations shall be rendered impregnable against ingenious inventors of synonyms." We think it will not be difficult to show that most of the professional Acts do ensure that synonyms of personal titles cannot be used with impunity. What is wanted is to establish the legislative principle that place names resembling titles of personal qualification should only be used by those who are personally qualified. This can be tried either with "pharmacy" and "pharmacist," or in a Bill generally applicable to statutory titles of qualification. Before the latter is forthcoming every drug-store in the country may be a "pharmacy," and have established a claim to some kind of recognition, and that will be too late. Is it to be so?

Budget Days.

AN important step has just been taken by the Board of Customs and Excise in the prohibition to any bonded warehouse being opened in future on a Budget day after the usual hour for closing. Warehouse keepers have been served with the following notice:

HOURS DURING WHICH BONDED WAREHOUSES MAY REMAIN OPEN ON BUDGET DAYS.

"The Board of Customs and Excise have directed that any concession under which bonded warehouses and warehouses

approved for the manufacture of tobacco, may be allowed to be open beyond the legal or the normal official hours, is to be suspended in future on the day on which the Budget is introduced by the Chancellor of the Exchequer in the House of Commons."

The concession referred to is the extension of time, generally from 4 P.M. to 6 P.M., granted to a warehouse-keeper on his application. Officials call it an "indulgence," and the occasion of its grant is conditional on the local collector deeming the trade exigency that has arisen to be exceptional and pressing. In no instance is the "indulgence" to be more than a temporary expedient, but inasmuch as these extensions confer trade advantages the "indulgences" have had the knack of often repeating themselves. On this account they are viewed not wholly disinterestedly by trade competitors, who, if they cannot succeed themselves in procuring these coveted "indulgences," begin to whisper about unfair treatment meted out by the revenue folk to their rivals. Such complaints become accentuated when advantage is taken by some enterprising bonder to clear his goods on a lower duty in the event of a surtax being imposed the same afternoon by the Chancellor of the Exchequer in the House of Commons. In that extension of time every minute is golden, for these "indulgences" permit delivery during the interval, and a lot of spirit can be cleared in two hours. The consequence is that both competitors and the revenue are at a disadvantage, and to stop this is the object of the new order. Henceforth officials are enjoined to shut the door sharp to time—4 P.M.—on every Budget day in future, and any disregard of this instruction will incur pains and penalties to the official in charge of the key. The order necessarily wipes out all possibility of favour to any particular person, and is not expected to embarrass anybody.

New Italian Pharmacopœia.

THE third edition of the Italian Pharmacopœia has just been published, and a glance through it shows no striking new departure. On the contrary, its contents are strictly conservative, and the three members of the Commissions responsible for this as well as the previous edition specially mention in the preface that care was taken to avoid the inclusion of tedious or complicated tests, and only those easy of application have been adopted. The tests apply to the discovery of the more common impurities or adulterations, which are also indicated in brackets in each monograph. In view of the proposals advanced by Messrs. Hill and Umney (*C. & D.*, February 12, p. 271) to include in the next B.P. monographs on essential oils, more optical rotations as well as refractive indices, it is interesting to note that the new Italian Pharmacopœia has omitted these tests, on the ground that the optical rotation varies considerably in different qualities of the same genuine oil, and would entail the purchase of costly apparatus, which it is not deemed advisable to impose upon the pharmacist.

The same attitude was adopted in the last edition of the Swiss Pharmacopœia. The following are examples of the Italian monographs:

Oleum Cinnamomi.—S.G. 1.024 to 1.040. Four drops cooled to 0° C. and shaken with 4 drops of fuming nitric acid should yield a crystalline mass. Four drops diluted with 10 c.c. of alcohol give on addition of 1 drop of solution of ferric chloride a red-brown liquid; a green or red coloration indicates *ol. caryophylli*. Heat 10 c.c. of oil on the water-bath with 90 c.c. of a 30-per-cent. solution of sodium bisulphite, well shaken; on cooling, and after allowing to stand for some time, the upper layer should measure not more than 3 c.c., which indicates a content of not less than 70 per cent. of einnamic aldehyde.

Oleum Eucalypti.—S.G. 0.910 to 0.930. Ten c.c. of oil shaken with 90 c.c. of a 50-per-cent. aqueous solution of

resorcin should not yield more than 3 c.c. of oily residue uncombined, indicating at least 70 per cent. of cineol.

Oleum Caryophylli.—S.G. 1.045 to 1.070. Shake 0.5 c.c. with 10 c.c. of boiling water; the filtrate, on cooling, should scarcely show an acid reaction, and should not give a blue coloration on the addition of ferric chloride (phenol). Ten c.c. of oil heated on the water-bath for ten to fifteen minutes, shaking frequently, with 40 to 50 c.c. of 5-per-cent. aqueous solution of potassium hydroxide, should not yield more than 1.5 c.c. of oily residue (85 per cent. of eugenol).

Oleum Lavandulae.—S.G. 0.885 to 0.895. Three grams of oil is saponified with 10 to 15 c.c. of normal alcoholic solution of potash, neutralised exactly with hydrochloric acid, and then evaporated to dryness on a water-bath. The residue, dissolved in water and filtered, should, after addition of solution of calcium chloride (1:1) and on heating, not become cloudy (triethyl citrate). Two grams of oil and 20 c.c. of seminormal alcoholic solution of potash are heated for half an hour on the water-bath under a reflux condenser, and the mixture allowed to cool. It is then diluted by the addition of 100 c.c. of water and titrated with seminormal solution of sulphuric acid, using phenolphthalein as an indicator. Not more than 12.8 c.c. of seminormal sulphuric acid should be required to cause the pink colour to disappear, which corresponds to about 35 per cent. of linalyl acetate.

Oleum Santali.—S.G. 0.975 to 0.985. Ten grams of oil is boiled for 1½ hour under a reflux cooler, with about 10 grams of acetic anhydride and about 2 grams of anhydrous sodium acetate. "Allow to cool, add 15 to 20 c.c. of water, and digest on the water-bath for fifteen minutes. Cool, remove the aqueous layer by means of a separator, and wash the oil with a dilute solution of caustic soda and lastly with water; then dry by means of anhydrous sodium sulphate. Five grams is now accurately weighed off, to which add 40 c.c. of normal alcoholic solution of potash and boil under a reflux cooler for one hour. To the liquid add 2 drops of phenolphthalein, and normal hydrochloric acid till colourless; 20.9 to 22.5 c.c. should be required, representing a content of 84 to 77 per cent. of santalol.

For a similar reason to that followed as regards oils all microscopic details relating to the structure of plant-drugs have been omitted. Among the general rules is one to the effect that all solutions for hypodermic or intravenous injection are to be sterilised, and a chapter on sterilisation has been added to the work. The proposals of the Brussels Convention have been largely adopted, but in the case of aconite-root, belladonna-leaves, and hyoscyamus no assay-process is given. In the case of belladonna-leaves attention is drawn to possible adulteration with the leaves of *Phytolacca decandra*. Natural camphor alone is official, and the following test is given to distinguish it from the artificial product:

Heat 0.5 gram of camphor with 2 to 3 grams of marble lime, wash the mass with 10 to 15 c.c. of boiling water, and filter; the filtrate, acidified with nitric acid, should scarcely appear opalescent on the addition of silver nitrate.

The monograph on aconitine is rather interesting. The formula is given as $C_{34}H_{47}NO_{11}$, and the melting-point, when pure, between 197° and 198° C. It should not have a bitter taste (amorphous alkaloids of aconite), must be crystalline, and not melt below 186° C. It should dissolve without coloration in concentrated nitric acid, and the solution on evaporation should yield a residue which, dissolved in 1:10 alcoholic solution of potassium hydroxide, should not assume a violet colour (pseudo-aconitine). The solution in concentrated sulphuric acid should remain colourless for one hour on the addition of one drop of simple syrup, and not assume a red colour (aconine). The total quantity of alkaloids present in powdered ipecacuanha, not dried, should not exceed 2 per cent.; if over this figure the powder is to be suitably diluted with milk sugar.

Among the newer therapeutic agents are aceto-salicylic acid, adrenalin, diacetyl-morphine hydrochloride, bromoform, hydrastinine hydrochloride, diethylmalonyl-urea, hexamethylenetetramine, quinine ethylcarbonate, silver fluoride, sodium formate, pyramidon, methyl salicylate, stovaine, trional, trioxymethylene, betol, benzophenol dermatol, guaiacol carbonate, and ichthyol. Among the appendices is a list of Italian specialities which have been

accepted for inclusion in the Pharmacopœia. By a Ministerial decree, intended to promote the sale of national specialities, manufacturers were invited to send samples to the Commission together with the following data:

Formula of composition.

Number of years during which the preparation has been on the market.

Places where the largest sales take place.

Annual production.

Method adopted by the manufacturers to assay the principal active ingredient.

Eighty-eight preparations of this class have been included in the Pharmacopœia; in each case the name of the manufacturer is stated and the composition. A list of preparations which may be sold by any tradesman is also given; among these are citric acid, bicarbonate of soda, camphor, glycerin, leeches, cod-liver oil, simple syrup, sugar, and vaselin. Another list gives those preparations which may be sold outside a pharmacy, but not in smaller quantities than the minimum indicated against each, viz.: Boric acid, 200 grams; peroxide of hydrogen, 100 grams; peppermint oil, 10 grams; ether, 200 grams; lanolin, 100 grams; castor oil, 200 grams; alum, 200 grams; potassium iodide, 200 grams; and others. The new Pharmacopœia will not satisfy the demands of the ultra-scientific pharmacist, who pleads for the inclusion of all the latest and most delicate tests; but as the nature of the average pharmacist's business precludes in many cases the practical application of such tests, the attitude adopted by the Italian, Danish, and Swedish Pharmacopœias is worthy of note. The simpler the tests, the more likelihood there is of their being applied, and less excuse is offered to the pharmacist to shirk the task of controlling his supplies personally by tests which are neither so tedious as to preclude attention to business nor so refined as to require costly and complicated apparatus to carry them out.

Medicines for "Weakness."

The following letters have passed between us and the Board of Customs and Excise:—

The Secretary,

Board of Customs and Excise,

Upper Thames Street, E.C. February 15, 1910.

Sir,—Would you be good enough to inform me how your Board treat the expressions "nerve weakness," "physical weakness," and "nerve and physical weakness," in the description of a medicine? I understand that hitherto the Board have not regarded "want of nerve power," "weakness of the stomach," and "constitutional weakness" as distempers, maladies, ailments, disorders, or complaints within the meaning of the Act, and I should like to know if "weakness" generally, whether or not referring to any particular part of the human body, is similarly regarded.

I am, yours faithfully,

THE EDITOR.

Custom House, London, E.C.

February 22, 1910.

Sir,—In reply to your letter of the 15th inst., I am directed by the Commissioners of Customs and Excise to inform you that in practice it has not been usual to press for duty where the recommendation of a preparation merely extends to certain minor ailments including "want of nerve power" and "weakness of the stomach," or where the recommendation says that a preparation "strengthens the system" or that it "is a powerful, general, and nutritious tonic." But, so far as the question of liability to medicine stamp-duty depends merely on the descriptive label attached to the medicine, it may be observed that, if to an organ of the body a word or words be added indicating the operation of the medicine upon the organ, the preparation must be stamped.

I am, sir,

Your obedient servant,

J. P. BYRNE (Secretary).

From this reply it is apparent that descriptions of medicines for "weakness" must be written with circumspection. We have recently had submitted to us labels which we thought went over the border line, and the Commissioners' opinion confirms this.

Examination of Olive Oil for the Presence of Arachis Oil.

By Charles A. Hackman, F.I.C.

THE sophistication of olive oil with arachis oil is, at the present moment, a matter of interest owing to the many recent recorded cases in which this old-time and insidious form of adulteration has been met with. It is, without doubt, the most difficult of ready detection, as the following broad limits for the quantitative reactions of the pure oils themselves show :

	Olive oil	Arachis oil
Sp. gr. at 15.5° C.	0.915-0.919	0.917-0.923
Saponification value	185-186	186-196
Iodine value	79-85	85-98
Zeiss Butyro-refractometer at 25° C.	61.5-63	64-67

It will be seen that the higher limits for olive oil overlap the lower limits for arachis oil, and when it is remembered that the iodine-value of genuine olive oils may in some instances exceed the limits given above, the difficulty of pronouncing a definite opinion in suspicious cases on the ordinary quantitative tests alone is at once apparent. Strictly speaking, and apart from the more indefinite characters of taste, smell, and appearance of the oil, a definite opinion should never be given in any doubtful case without testing for the presence or absence of "arachidic" acid. This test, due in the first place to Renard, is often described in the text-books as "tedious," but whilst this term is certainly far from the actual case, the test is a lengthy one and requires no little manipulative skill, for both of which reasons, in these highly competitive days of rapid reporting and often low fees, its application, as a routine standard, is sometimes out of the question.

The modification in which this test is usually applied is that known as the "Archbutt-Renard" method, and for convenience may be divided into three stages. The following notes on the manipulation of each stage form the object of this article, and may be of service at the present time :

Stage I.—Isolation of the Total Fatty Acids.

10.0 grams of the sample under examination are saponified, dissolved in boiling water, transferred to a separator, the soap-solution decomposed with hydrochloric acid, the resulting fatty acids shaken out with ether, washed, transferred to a flask, the ether distilled off, and the residue dried in the oven at 100° C. until free from water.

Instead of employing the lengthy alcohol-soda method of saponification usually given, this stage may be materially shortened by the glycerol-soda process. The working details are as follows :

Weigh 10.0 grams of the oil into a 300-c.c. Jena flask, add 25 c.c. of glycerol-soda,* and heat—cautiously at first—over a naked bunsen burner. For this purpose the flask should be gripped by the neck in a suitable holder and given a rotary movement in and out of the flame at short intervals. In five minutes at most saponification will be complete, as shown by the sudden clearing of the contents of the flask. About 30 c.c. of boiling water are next added—a few drops at first to prevent loss from foaming—and the resulting clear soap-solution transferred and rinsed from the flask to a separator with three small washings of boiling water. To the soap-solution is added a drop of methyl orange and strong hydrochloric acid, drop by drop, until a permanent pink colouration shows the decomposition of the soap to be complete. The separator is then cooled under the tap, 50 c.c. of methylated ether added, the separator securely stoppered, and well shaken until the fatty acids have passed into solution in the ether. After standing for about one hour, the aqueous layer is run off, and the ethereal solution washed with three successive portions of 25 c.c. of water, allowing at least ten minutes after each "shake" for the ethereal and aqueous layers to separate. The

ethereal solution is then transferred to a suitable flask—pouring it from the top of the separator and rinsing out with the aid of an ether wash-bottle, and *not* running it through the tap. In this way all globules of water will be retained in the separator, and will not pass to the flask containing the ether. The ether is then distilled off, the vapour blown out, and the residue of fatty acids dried at 100° C. in the air-bath.

Stage II.—Separation of the Solid from the Liquid Fatty Acids.

The total fatty acids obtained above are dissolved in 50 c.c. of 90-per-cent. alcohol, solution being brought about by placing the flask in a water-bath heated to 43° C. and rotating until clear. Five c.c. of a 20-per-cent. solution of lead acetate is immediately added, and the contents of the flask are cooled to about 15° C., constantly agitating the while, and allowed to stand for about one hour. The lead salts are then filtered off, extracted several times with ether until the lead oleate is removed, and then transferred to a separator, decomposed with hydrochloric acid, and the liberated fatty acids shaken out with ether. The ethereal solution is washed free from acid with water, transferred to a flask, the ether distilled off, and the residue dried at 100° C. until free from water.

This second stage, involving the filtration and washing with ether of the lead salts, presents the chief manipulative difficulty of the whole operation. In the writer's hands the following method has worked satisfactorily :

A Buchner funnel is fitted with a disc of stout filter-paper, moistened with 90-per-cent. alcohol, and the mixed lead salts rapidly filtered off under reduced pressure. Immediately the filter is sucked dry, the vacuum is broken, and the lead salts are carefully returned to the flask by means of a spatula and ether wash-bottle. The lead salts—now in a lumpy condition—are thoroughly shaken, by briskly rotating the flask, with about 50 c.c. of ether until they are thoroughly broken up. The contents of the flask are now filtered under reduced pressure into another filter-flask. The first runnings at this stage may be turbid, and it is advisable to place in the filter-flask a suitable length test-tube in such a position as to catch the filtrate. In this way the filter-flask itself does not have to be rinsed out if the first runnings are turbid. Directly the ether runs through clear, the test-tube can be removed, its contents rinsed on to the filter, and the filtration proceeded with. The flask should be rinsed out with ether, and the salts rapidly washed twice with the same solvent. The vacuum should be broken immediately the last drop of ether has passed through, and the lead salts transferred back as before to the same flask. They should a second time be shaken with about 50 c.c. of ether, filtered, and washed, using a test-tube in the filter-flask to collect the first runnings as before. [As a rule the whole of the lead oleate will be removed by these two treatments, but this should always be ascertained by adding a few drops of H₂S water to 2 or 3 c.c. of the last ether washings. If only the faintest colouration be produced, the removal of the lead oleate may be regarded as complete.]

The vacuum is again broken immediately the last drop of ether has passed through, and the bulk of the lead salts transferred from the funnel to a separator by means of a spatula and ether wash-bottle. The remainder on the paper disc itself may be decomposed with a fine stream of boiling dilute hydrochloric acid delivered from a wash-bottle, and then dissolved off by ether, while the flask itself may be washed out in the same manner. The lead salts in the separator are next decomposed by the addition of strong hydrochloric acid in slight excess, more ether added to make its total volume approximate to 50 c.c., the separator stoppered, and the whole thoroughly shaken until the liberated fatty acids have passed into solution. After standing a short time for the two layers to separate completely, the lower aqueous layer, together with the insoluble lead chloride, is run off, and the ethereal solution washed twice (or more if necessary) with water until free from acid. It is then transferred to a flask—as in Stage I.—the ether evaporated off, and the residue of solid fatty acids dried in the air-bath at 100° C. until free from water.

Stage III.—Separation and Estimation of the Crude Arachidic Acid.

The residue of fatty acids obtained in the preceding stage is dissolved by warming to about 40° C. with 50 c.c. of 90-per-cent. alcohol. The flask is closed with a cork carrying a thermometer and allowed to cool slowly, the temperature at which crystals first appear being noted. According to Tortelli and Ruggeri, a rough estimate of the amount of arachis oil

* The glycerol-soda is prepared by dissolving 100 grams of stick caustic soda in 100 c.c. of water, and mixing this solution with glycerol in the proportion of 20 c.c. of soda-solution to every 180 c.c. of glycerol.

present may here be obtained by comparing this temperature with the figures given in the following table:

Temperature at which the crystals commence to form. ° C.	Arachis oil per cent.
35-38	100
31-33	60
28-30	50
25-26	40
22-24	30
20.5-21.5	20
18-20	10
16-17	5

The flask containing the crystals is next allowed to stand for about an hour at a temperature of either 15° or 20° C. (whichever is nearer that of the laboratory). The crystals are then filtered off and washed with three portions of 10 c.c. or 5 c.c. of 90-per-cent. alcohol—according to the amount present—allowed to drain, and the volume of filtrate and washings measured. The filter is next washed with 70-per-cent. alcohol until the washings yield no turbidity on dilution with water, the acids are dissolved in ether and transferred to a tared flask. The ether is distilled off, the residue dried at 100° C. until free from water, and finally weighed. To the weight of crude arachidic acid thus obtained, a correction must be added for the acid dissolved in the 90-per-cent. alcohol measured above. These solubilities were determined by Tortelli and Ruggeri, and have been condensed by Lewkowitsch ("Chem. Techn. and Analysis of Oils, Fats, and Waxes"), as shown in the following table:

100 c.c. of 90-per-cent. Alcohol Dissolve Crude Acid.

For amount of acid	At 15° C.	At 17.5° C.	At 20° C.
From 2.7 down to 0.5 grms.	0.070	0.080	0.090
" 0.47 " 0.17 "	0.050	0.060	0.070
" 0.11 " 0.05 "	0.033	0.040	0.045

Arachis oil contains on an average about 4.8 per cent. of acids separated in the above manner. The percentage found in the sample, multiplied by 21, will therefore give approximately the percentage of arachis oil present.

The third, and final, stage presents no especial difficulty. The filtration of the acids is best performed in a Buchner funnel fitted with a paper disc, without suction, until the last washing is reached, when it may be momentarily applied in order to thoroughly drain the crystals from the adhering alcohol. In the same way suction may be employed to remove the last of the 70-per-cent. alcohol washings before the crystals are transferred to the tared flask. In washing the crystals with the 90-per-cent. alcohol, Archbutt ("Lubrication and Lubricants," p. 274) recommends that it should be performed

with three separate quantities, either 10 c.c. or 5 c.c. each, according to the size of the precipitate, and after collecting the washing each time in a small beaker to pour it back through the filter two or three times so as to saturate it thoroughly before adding it to the main filtrate. Obviously this must be done at the same constant temperature as that at which crystallisation took place.

As soon as the crude acids have been weighed, capillary tubes should be prepared in order that the melting-point may be determined. According to Archbutt, Bensemann's method is preferable, and the point of incipient fusion should not be less than 71° C.

A FOREIGNER asked a Glasgow chemist the other day for Bum Ray, and on receiving Bay Rum he remarked that he had transplanted the words.

THE ADVANTAGES which follow a steady course of *C. & D.* reading cannot be over-estimated. Recently a young woman asked an Edinburgh chemist for a large-sized blister. He was doubtful when she mentioned the dimensions, but the customer said she was certain that a fly-blister was wanted. Ultimately she was persuaded to return home and ascertain of the person to whom the doctor had given the order. Then it was discovered that a mustard-leaf was required. The chemist had recalled a Court of Session action about damages arising from a blister, reported in the *C. & D.*

Winter Session.

Brief Records.

National Union of Assistant Pharmacists.—A meeting of the Birmingham Branch was held on Monday evening, February 21, at which there was a good attendance. The matters discussed were the financial policy and the Council election fund. Mr. F. Bentley was elected delegate to represent the branch at the annual meeting.

Dundee C. A. and A. Association.—A meeting was held in Mather's Hotel on Friday evening, February 18, Mr. J. Adamson presiding. There was a good attendance of members when Dr. J. K. Wood, D.Sc., delivered a very interesting address on "The Theory of Solution" as formulated by Arrhenius. At the close several questions were put to and answered by the lecturer, who was cordially thanked. A letter was read from Mr. John Anderson giving the result of the essay competitions held during the session, and intimation was given that the successful essays would be read at the next meeting, to be held on March 4.

Public Pharmacists' and Dispensers' Association.—At the meeting held by this Association at St. Bride Institute, London, E.C., on February 23, the President (Mr. G. W. Udale) read a paper on "Homœopathic Pharmacy." The range of preparations, from tinctures and triturates to cerates, glyceroles, and opodeldocs, were carefully explained, details being given of the decimal and centesimal systems in use for dilutions. Among those taking part in the subsequent discussion was Dr. Jagalski, an homœopathic practitioner and an enthusiast on the treatment. He entered into the mode of obtaining the provings of medicaments, and said that, as homœopathy examined the remedies individually, so they treated their patients individually. It was in chronic diseases that the highest dilutions were indicated. Messrs. R. W. Lindsay (Chairman), Mellor, Noad Clarke, Hewitt, Rutter, Elias, and Welford also took part in the discussion, to which Mr. Udale replied. A cordial vote of thanks was accorded to Mr. Udale.

Peterborough Association of Pharmacists.—The annual meeting was held at the Grand Hotel on February 17. The President (Mr. J. W. Hall) occupied the chair. There were also present Messrs. Girling (Wisbech), Turner (St. Ives), Prior (Stamford), Bayley (Uppingham), Bullivant, Hurst, Mitchell, and Woodward (Boston), Calcutt, Whitwell, Long, Reeks, J. G. Sturton, J. E. Saunders (Hon. Treasurer), H. E. Noble (Hon. Secretary), and A. J. Chater (London). The Hon. Secretary read his report and was followed by the Hon. Treasurer, whose statement of accounts showed a substantial balance in hand. The officers for the ensuing year were then elected as follows: *President*, Mr. H. S. Turner (St. Ives); *Vice-Presidents*, Mr. T. M. Baxter (Bourne); Mr. S. J. Hurst (Boston), Mr. L. W. Bodger (Peterborough); *Members of Council*, Messrs. J. G. Sturton, F. Sturton, F. W. Whitwell, T. J. Calcutt (Peterborough), J. S. Prior (Stamford), C. Bayley (Uppingham), E. W. Bell (Spalding), W. R. Girling (Wisbech), S. J. Hurst (Boston); *Hon. Treasurer*, J. E. Saunders (Peterborough); *Hon. Solicitor*, W. H. Sturton; *Hon. Secretary*, H. E. Noble; *Auditor*, Mr. Long.

Bradford Chemists' Association.—A meeting was held at the Rawson Hotel, Bradford, on Tuesday evening, February 22, Mr. John Gordon (President) in the chair. There was a good attendance. Mr. R. T. Silson (Hon. Secretary) reported upon his communication with the Secretary of the P.A.T.A. regarding the French coupon system of protecting proprietaries. Mr. Glyn-Jones, in his reply, pointed out that in the early days of the P.A.T.A. the scheme had been discussed, but as it would involve a large clearing-house and a big staff of clerks, the present P.A.T.A. system was adopted in preference. Mr. Glyn-Jones also stated that there are only about sixty manufacturers in the French coupon system, against 300 in the P.A.T.A. He thanked the Association for their interest in the matter. Mr. Silson also read a letter from the Board of Custom and Excise, stating that "Balsamic Eye-ointment" is a dutiable description. Mr. W. Kirkby, M.Sc., then delivered his lecture on "A Quack of the Seventeenth Century," substantially as reported in the *C. & D.*, February 19, p. 295. The members thoroughly enjoyed the lecture, and on the motion of Mr. Marmaduke Firth, seconded by Mr. A. Hanson, Mr. Kirkby was cordially thanked.

Brighton Association of Pharmacy.—A meeting was held at the A B C Rooms, 58 King's Road, Brighton, on February 17, Mr. W. H. Gibson, F.C.S. (President) in the chair. Messrs. Ashton, Black, Cain, Franklin, Gwatkin, Guy, Hall, Jones, J. Padwick, K. Padwick, Pitt, A. Plowright, J. Plowright, Savage, Yates, and C. E. Robinson

(Hon. Secretary) were also present. The Buying Club, which was inaugurated six years ago, has yielded to pressure brought to bear by the P.A.T.A., and been closed up by mutual consent of its members. The valuable services ungrudgingly given by Messrs. W. W. and G. B. Savage in their capacity as Hon. Stock-keepers were gratefully recognised. Much regret was expressed that the shortage of funds compelled the Pharmaceutical Society to suspend for this year the election of annuitants, and after a discussion it was decided to send round a whip to all pharmacists and their assistants who have not already subscribed to the Benevolent Fund asking them to do so, and if no immediate response be forthcoming, a collector should call and press the claims on non-subscribers. Mr. L. Cameron, of Seaford, was proposed and unanimously elected as a member. It was resolved to hold a whist-drive and dance, and a sub-committee was appointed to carry out the arrangements.

A Series of Afternoon Meetings was inaugurated by the Derby and Derbyshire Chemists' Association on February 16, when the members visited the Derbyshire Royal Infirmary, one of the best-equipped and up-to-date hospitals in the country. Mr. Bassano, the pharmacist in charge, and Mr. Banks, the Assistant Secretary, received the company, which, under their guidance (each having a party), went round the different departments. Probably the department to cause the greatest admiration was the ophthalmic operating-theatre, which is exceptionally well equipped. After looking through the out-patients' department, the electrical department was closely examined, for there the apparatus for Finsen-light and Röntgen-ray treatment is excellent. The pathological laboratory was next visited. There the party inspected the pharmacy, in which 300 bottles of medicine are frequently dispensed in one day. The Board-room was finally visited, and at the end of two and a half hours' inspection a welcome cup of tea was served, and gave the opportunity for a chat on various matters relating to pharmacy. Mr. Southern (Belper) proposed a hearty vote of thanks to Mr. Bassano for his interest in the Association and the courtesy shown to the members that afternoon. Mr. Osbourne (Asbourne), in seconding, expressed the pleasure he had in taking part in a gathering such as this, and said he should always make it a duty whenever possible to take part in the afternoon sessions. Mr. Banks, the Assistant Secretary, was also thanked. Thus the new arrangements for bringing the members together have started most auspiciously.

Irish Chemists' Assistants' Association.—At a meeting held at 48 Talbot Street, Dublin, on February 18, Dr. R. M. Bronte, pharmaceutical chemist and Examiner of the Pharmaceutical Society of Ireland, lectured on "Pharmacy and the Medical Profession." Mr. A. Harmel presided. Dr. Bronte spoke for two hours, and treated the subject historically. From a moral point of view, medicine and pharmacy have not advanced. The proprietary-medicine trade "should be swept away with one fell blow" as the curse of pharmacy. Referring to the training of apprentices, Dr. Bronte said that the pharmacist who allows his apprentice to sweep the path or do a porter's work in the shop "is guilty of an offence too heinous for words," as he robs the boy of his personal dignity, and made him a fit subject for subservience to the doctor. The lecturer advocated that a medical man should obtain two years' experience of pharmacy in a chemist's shop before he was allowed to practice his profession. The reunion of pharmacy and medicine would be to the advantage of both. Dr. Bronte was heartily thanked for his lecture.—A meeting of the Belfast Branch was held in the Avenue Hall on February 16. Mr. G. W. Camlin, Ph.C., in the chair. It was announced that over fifty members had joined the branch. Mr. Harmel, of Dublin, was present to assist in the formation of the branch. The election of President and Vice-President was deferred for the present, but Mr. H. F. Moore and Mr. J. Hall were elected Hon. Secretary and Treasurer respectively. The following committee was appointed: Messrs. G. W. Camlin, W. Cromie, R. Mellin, T. E. Dixon, H. B. C. Gordon, C. Doig, G. Wallace, J. Law, M. Kelly, H. Heazley, W. Curr, Campbell, and Nesbitt. The committee are to inquire for suitable rooms as headquarters of the branch.

Cardiff Pharmaceutical Association.

A meeting of this Association was held on February 23, Mr. J. Lee Jones (President) in the chair.

COUNCIL ELECTION.—A discussion took place on "The Value of Local Organisations and their Possibilities." Mr. A. Hagon approved of the suggestion that candidates for the Council of the Pharmaceutical Society should be selected by local associations. Many members of the

Society never exercised their vote, and he held that members must take greater interest in the work of the Society they were supposed to guide. Mr. R. Mumford advocated territorial representation, as it is impossible for the members to take an interest in the election of a candidate who is a total stranger. A man should only remain on the Council so long as he proved himself a useful member. It is time for the Society to strike out a new line. Mr. Hagon pointed out that there is practically a geographical distribution of candidates at present. Mr. Mumford contended that the lack of interest in the Council election is due in a great measure to the present method of election, and on his suggestion it was resolved to hold an inquiry with a view to improving the present method.

PROPRIETARY MEDICINES.—Mr. Hagon pointed out the difficulties in dealing with patent medicines. If the public could not obtain these from chemists they would simply go to their competitors. It is a business that has grown up within the last thirty years, and probably, looking at the trade broadly, it has now reached high-water mark. Indeed, he could not but think that there is an ebbing of the tide, and that the sales are beginning to go down. It seems to him that their wiser plan is to go on as they are doing, and let the patent-medicine factors kill themselves as they are doing. The cost of advertising is so great, and the quantity of quack medicines on the market is so large, that the public are beginning to look askance at them. He suggested that the trade should refuse to take up any new patent medicine unless they had a guaranteed profit of 25 per cent.

Chemists' Assistants' Association.

A meeting was held at 73 Newman Street, London, W., on February 17, Mr. F. L. K. Loxley (President) in the chair. The subject for the evening was an exposition by Mr. G. T. Gale of

THE BROMOIL PRINTING-PROCESS.

The lecturer explained that the "Bromoil" method gives unlimited control over the light and shade (the *chiaro-oscuro* of the artist) of a print, and several examples were shown. The oil process was then described, sensitive chromated gelatin films being printed under a negative in daylight, and after washing away unaffected gelatin the wet print is worked over with pigments in an oily base. Direct negatives and daylight printing are thus required. The foregoing remarks led up to the explanation of the *rationale* of the "Bromoil" process, which is free from both the disadvantages of the oil process. It is found that if the reduced silver image of a bromide print be bleached (oxidised) in the presence of potassium bichromate, the gelatin basis is chromated as if it had been exposed to light, the gelatin being rendered insoluble in strict ratio to the amount of reduced silver previously present. The details of the process followed next. A straight (un-retouched) bromide-print is made preferably from a strong (contrasting) negative. Mr. Gale employs Wellington & Ward's platino-matt or cream crayon bromide papers. Only fresh bromide prints should be used, and it is best to over-expose slightly and develop "right out" with half-strength amidol developer, taking as long as possible over the process. The print is fixed and washed thoroughly in the usual way. The object is to obtain as much relief as possible in the gelatin image on the bleached print, since the brilliancy of the finished picture depends on this quality. Manley's formula for bleaching-solution was given, but the lecturer finds the following adaptation of Hewitt's formula to give satisfaction:

A		B	
Potassium bichromate ...	5ij.	Pure hydrochloric acid ...	5ij.
Potassium bromide ...	5j.	Water ...	3xxv.
Potassium ferricyanide ...	5j.		
Water to ...	5x.		

Mix equal proportions of A and B for use as bleaching-bath.

By using the above "bleach" the three baths are reduced to two and an intermediate washing is eliminated. When the print is quite bleached it is transferred directly to the following bath to remove the silver compounds:

Sodium hyposulphite ...	...	...	2 oz.
Solution of ammonia (0.880) ...	...	...	60 minims
Water to ...	...	...	20 fl. oz.

The print is then washed and dried. Before pigmenting it should be soaked for at least one hour. The temperature of the soaking water is important, and in cold weather it should be raised to 65°-70° F. After surplus water is removed, by means of a well-washed rag, from the soaked print supported on a pulp-board, it is ready for pigmenting. With pigmentation the realm of photography is left and the results now depend upon the artistic perception and dexterity of the worker. The pigments are lithographic inks, thinned down, but Mr. Gale employs special artists' colours, thinned down with megilp, which he finds to be the best medium, but raw or boiled linseed oil may be used for the purpose. The pigment is rubbed down on a slab with a palette-knife and spread into a thin layer, so that the pigment will be confined to the extreme tip of the bristles of the brush. The brushes used are painters' brushes cut down quite flat, leaving about $\frac{3}{4}$ in. of bristles. It is best to start with rather stiff pigment and thin down as required, the darker portions being commenced upon first. The necessary movements were demonstrated, a firm quick dab being used for laying on the pigment, which by this means can be forced upon wet portions of the print which ordinarily would not take it. An excess can be removed either by a hopping motion of the pigmenting brush, which is caught at each rebound, or by means of a wet sable brush. Mr. Gale said that the chief difficulty met with is insufficient relief of the gelatin image, which yields "flat muddy" pictures. The water in various parts of the country appears to be partly responsible for the different results obtained. He thought a small proportion of iron in the soaking water favourably affected the picture. An example was shown of a fine picture obtained from a "washy" bromide print, which was hopeless in the ordinary way, but which was successfully pigmented by adding a very small quantity of ferrous sulphate to the soaking-water. Thin megilp is used to brighten the shadows only. A vote of thanks was given to Mr. Gale.

North-East Lancashire Chemists' Association.

A special meeting was held at the White Bull Hotel, Blackburn, on Tuesday evening, February 22, Alderman R. Shorrocks, J.P., presiding. There was a large attendance. Mr. J. Rennie (Secretary) reported that the Executive met on the previous evening, when the following resolution was unanimously passed:

"That it is desirable to declare a definite policy, having for its object the attainment and security to the practising individual of the exclusive title and distinctive name 'pharmacy,' for premises used by such practising individuals."

Mr. Rennie also reported that he recently sent a letter to Mr. Brembridge, Secretary of the Pharmaceutical Council, asking if it would be possible for Mr. Chater to come to Blackburn in the near future and lay before the members of the Association the present position of pharmaceutical politics. The following reply, dated February 14, and bearing the London postmark the 17th, was received:

"I have your letter asking whether it will be possible for Mr. Chater to come to Blackburn and to give the members of your Association some idea of the general position of pharmaceutical politics. Will you permit me to point out that, having regard to the fact that there is a member of the Council resident in Blackburn to whom the whole of the facts concerning the present position must necessarily be known, and also having regard to the circumstances that this Councillor will, in all probability, be a candidate for re-election at the election in May, it would be invidious for any representative of the office here to address the members of the N.E.L. Association on current politics. To put it in other words, might it not be considered improper for any member of the staff here to say or do anything that might affect the Council election?"

The Chairman said the matter was carefully considered at their meeting the previous evening, and, as an outcome, they were hoping that Mr. Gifford would give an important notice of motion on the question under review for the next Council meeting.

Mr. W. Holt moved the following resolution:

"That it is the urgent duty of the Pharmaceutical Council to impress upon the Government the necessity of bringing in an amending Bill, restricting the title 'pharmacist' to

the qualified person practising in his individual capacity, and that such persons only may use the descriptive placename 'pharmacy.'"

Mr. Holt spoke on "the abject failure of the Poisons and Pharmacy Act, 1908," so far as "pharmacist" and "pharmacy" are concerned. This failure had resulted, he said, in absolute chaos, and had placed chemists in an infinitely worse position than they were before the Act. It had now become imperative that the Council should declare a policy of securing for them exclusively the titles he had named. He regretted there were difficulties in the way. The Council and the office appeared either unwilling or unable to make headway. Nothing seemed to incite them towards reform, and they remained stolid and indifferent at this most critical period.

The resolution was seconded by Mr. Grimshaw, and Mr. E. Highton (Divisional Secretary) supported it. He said they not only wanted a change of policy, but a change of politicians, and to his mind it was about time they cleared them out altogether. (Hear, hear.)

Mr. Lomax and Mr. Aspinall also supported the resolution.

Mr. Gifford said it was evident the members looked upon the letter received from Mr. Brembridge in a serious light. He acknowledged that, on the face of it, there was an element of plausibility about it. As a member of the Council, he ought to know all that took place on that Council and to keep them well informed. He asserted that he had always been at their service, and he had given them all the information possible. He maintained that he had done his work on the Council as no other member of the Council had done it. He had taken care to attend every committee meeting during the nine years he had been on the Council with one exception, and that was when an election, in which he was the candidate, was taking place in Blackburn on the very day of the Council meeting. After the controversies which had taken place, and after the insinuations and innuendoes which might give an ordinary observer an impression very far from the true one, he thought it necessary to make the statement he had done. The Secretary had referred to an official having some effect on the elections. Personally he did not see the application. To him the remark seemed uncalled for and improper. (Hear, hear.) He (Mr. Gifford) had been ready and willing to give up his position as a member of the Council; in fact, he was anxious to do so, because he was sick and tired of banging his head against the stone wall of officialism. It had been said that there was no tyranny so great as that of officialism, and certainly there was no stronger evidence of weakness than for officials to have their way. Mr. Chater was the gentleman he singled out some time ago as an ideal person for the position of organising secretary. That idea was scouted and was effectually opposed by the officials. There was not a member of the Council who said that the idea was not a good one or that Mr. Chater was not admirably adapted for the situation. During the year they (the Council) had taken a step intended to give the impression that it was in the direction he had named. In reality, however, it was not, for the resolution read that Mr. Chater be at the service of the Secretary and the President in order to visit local associations, to give them information, and to perform other services. But it was a different matter to make Mr. Chater an official responsible to the Organising Committee who were responsible to the Council. If the letter they had received was anything to go by, then all he could say was that it was an unfortunate system—a system of secret service. Having asserted that the principle underlying the agitation for the recent Act was to reserve to the qualified person the title of "pharmacist" and "pharmacy," Mr. Gifford said, in view of the undertaking given by responsible members of the Government, they could reasonably go to the Government and ask for a simple act of justice. They had no need to fear going to a member of Parliament with a reasonable case, and personally he had never had a rebuff from an M.P. in all his experience. He supported the attitude the Association were taking up.

The resolution was carried unanimously.

Festivities.

Oldham Chemists Dine.

The annual dinner of the Oldham and District Pharmaceutical Association was held at the Café Monico, Oldham, on Tuesday evening, February 15, Mr. C. Gartside (President) in the chair. The company included Messrs. W. S. Glyn-Jones, J. Lees, W. Yates, J. Shaw, H. Bagshaw, F. Newby, T. Baker, W. Gartside, F. Davies, W. Cocks, E. H. Holden, Wm. Braddock, J. W. Webster, J. A. Buckley, G. N. Cooper, T. Shackleton, R. J. Fryer, M. Stoddart, G. A. Jones, T. Davies (Evans Sons Lescher & Webb), E. Walters (Potter & Clarke), Grime, Steeple, and T. Pickering. After the loyal toasts, Mr. J. Lees proposed "The Pharmaceutical Society," referring in eulogistic terms to the work of Mr. Glyn-Jones on behalf of the pharmacists of this country. Mr. Glyn-Jones was accorded a most enthusiastic reception on rising to reply. He gave a lucid address on the present position of pharmacy, dealing particularly with the Poisons and Pharmacy Act, the use of the description "pharmacy," and the work of the P.A.T.A. Questions were invited, and many were asked and satisfactorily answered. A hearty vote of thanks was given to Mr. Glyn-Jones. During the evening songs and recitations were given by Mr. Stoddart, Mr. F. Newby, and Mr. G. A. Jones.

A Varied Night.

The Aberdeen Pharmaceutical Association were "At Home" in the Carlton Rooms, Union Street, on Monday, February 21. From 8.30 to 10 p.m. the company were entertained to a varied programme of phonograph selections, songs, recitations, &c., contributed to by Misses Millar and Pirie, Messrs. Calder, Forsyth, Kidd, Hinrichs, Lyall, and Master Ernest Simpson. At 10 p.m. a party of about fifty sat down to supper, Mr. Robert Leslie (President) being in the chair. Supper finished, Mr. J. R. Reith proposed the toast of "Those who had contributed to the programme," in doing which he lamented the lack of "talent" in the trade. Mr. Alex. Kidd replied in a humorous speech, eulogistic of local pharmaceutical socials, and confident of the latent "talent" of pharmacists. Mr. A. C. Hinrichs (P., D. & Co.) proposed "The Aberdeen Pharmaceutical Association," emphasising the many benefits, business and social, that accrue from such organisations. The Chairman acknowledged the toast, remarking how few the opportunities are for social intercourse among pharmacists, and expressing his pleasure at seeing such a representative gathering on this occasion. The main portion of the party then adjourned to the ball-room, while a section of non-dancers had a pleasant bridge-party in an adjoining room. The parting hour at 1.30 a.m. came all too soon, when expressions of "a most enjoyable evening" were freely heard.

Assistants' Smoker.

A smoking-concert organised by the London Branch of the National Union of Assistant Pharmacists was held at the Enterprise Tavern, Long Acre, London, W.C., on February 23. At the commencement about twenty-five members were present, but within a short time the number increased to between fifty and sixty. Mr. A. Kirkland was in the chair, and he called upon Mr. F. Bullen to read a communication from the Hon. General Secretary, in which it was stated that the success of the Union was due to the fact that the questions of hours of labour and wages were put in the foreground, and that the membership includes qualified assistants, whether employed by private chemists or stores. The matters which require careful watching in the future are the question of admitting apothecaries' assistants to the register without examination and the Shop-hours Bill. The message concluded with an injunction to the members to foster the spirit of comradeship and to "vote for Dowty and Waldron," the N.U.A.P. candidates at the election for councillors of the Pharmaceutical Society. Then followed some facetious messages from absent friends, these including Mr. Asquith, Mr. Balfour, Mr. Glyn-Jones, Mr. Woolcock, and Mr. Bremridge. The message purporting to come from Mr. Glyn-

Jones was to the effect that "I am wooing Elsie (L.C.) C., and have great expectations of the Union"; whilst Mr. Bremridge's was that "I am reserving two seats for you at the round table." The musical programme was opened by a song from Mr. Terry Holloway (Chairman of the Branch), and after him followed numerous songs and recitations, some of them exhibiting a surprising amount of talent. A pleasing feature of the evening was the friendly manner in which everybody was received and made to feel "at home."

The "Junior" Ball.

The most unmistakable sign of the success or non-success of a social function is the number that remain till "the death." There were about 350 present at the twenty-ninth junior pharmacy ball at the Portman Rooms, Baker Street, W., on Wednesday, February 23, and on Thursday morning, February 24, when (about 4 a.m.) the last waltz was in full swing, about three hundred were left. This speaks volumes for the hard work, care, and attention devoted to the arrangements by the committee (Messrs. R. L. Cassie, T. Coulson, R. D. Dixon, C. W. Martin, A. H. Solomon) and the irrepressible Hon. Secretary (Mr. J. E. Southon). Under the watchful eye of these genial and experienced masters of the dance, Mr. Cassie and Mr. Martin, everything went with a swing from start to finish. The supper arrangements were admirable, and everybody seemed to be out to enjoy themselves—and did. Mr. Gilbert Christy (Thos. Christy & Co.) presided at the supper, and in a brief, but particularly happy, speech gave the traditional toast "The Ladies and Success to the Junior Pharmacy Ball." The ladies were vociferously acclaimed in harmonic tones as "jolly good fellows" by the enthusiastic males, and Mr. Southon having said a few words was likewise declared to be a "jolly good fellow." In like manner the committee, specially congratulated from the chair, were acclaimed before the serious business of the evening was resumed. Amongst those present were Lieut.-Colonel Preston, Mr. Alan Francis, Mr. and Mrs. H. Raithby Procter, Mr. and Mrs. W. S. Gill, Mr. and Mrs. T. Desnos, Mrs. Leo Atkinson and the Misses Atkinson, Mr. and Mrs. C. J. G. Bunker, Mr. and Mrs. Harry Hickey, Mrs. Cassie, Mr. and Mrs. A. R. Arrowsmith, Mr. and Mrs. Presant, Mr. W. T. Idris and Miss Gibbons, Mr. G. S. V. Wills and Miss Wills, Mr. and Mrs. Lownsbrough, Mr. and Mrs. Charles Brooks, Mr. Sydney Jamieson, Mr. Alec Boyes, Mr. A. Philpott, and Mr. J. W. Royle.

Peterborough Pharmacists Dine.

The annual dinner of the Peterborough Association of Pharmacists was held at the Grand Hotel on February 17. Supporting the Chairman, Mr. J. W. Hall (President of the Association), were Mr. George Greenwood, M.P., Mr. J. F. Harrington (President of the Pharmaceutical Society of Great Britain), Councillor Whitised, Alderman A. S. Campkin, J.P. (Cambridge), Messrs. J. G. Sturton, H. E. Noble (Hon. Secretary), H. S. Turner (St. Ives), J. S. Prior (Stamford), C. Bayley and G. Taylor (Uppingham), F. W. Whitwell, W. R. Girling (Wisbech), A. J. Chater (London), W. Elborne, M.A., H. Reeks, Walter Wilson, Walgate (Hull), Nelson (London), T. Milbourn, Frank Sturton, J. P. Ker Watson, W. Southwell, H. S. Purdie, W. J. Willcock, W. Ecob, Long, T. J. Calcutt, W. T. Wilson, and T. M. Baxter (Dourne). After dinner Alderman Campkin proposed the toast of "The Houses of Parliament," to which Mr. George Greenwood, M.P., replied. He said that since he was last present at the Association's dinner Parliament had succeeded in passing some pharmaceutical legislation, although it was in the nature of a compromise. Mr. F. W. Whitwell toasted "The Pharmaceutical Society of Great Britain," and to this the President of the Pharmaceutical Society (Mr. J. F. Harrington) replied. He referred to the Registrar's report in considerable detail (*C. & D.*, February 5, p. 223), and, speaking about the Poisons and Pharmacy Act, said it is regarded in various ways in different parts of the country, according to the class of business. To all pharmacists he said it is not the intention of the Council to let the Act of 1908 rest. (Applause.) It is not intended to let it drift, but to take matters actively in hand. (Hear, hear.) The Act has many faults, but it has also many merits. (Hear, hear.) It has great possibilities, and the Council

is doing its best to get the greatest benefits from the Act for chemists. The rest of the speech referred to the Benevolent Fund, to which subscriptions of 5s. a year are as welcome and serve the same purpose as a donation of ten guineas. Mr. A. J. Chater proposed "The Peterborough Association of Pharmacists," to which the Chairman briefly replied. Mr. J. G. Sturton proposed "Kindred Associations," and to this Mr. Willson (Grimsby) replied. Mr. Baxter gave the health of "The Visitors," for whom Mr. Ker Watson (Chief Constable of Peterborough) responded.

School of Pharmacy Dinner.

The annual dinner of the School of Pharmacy of the Pharmaceutical Society of Great Britain took place on February 22 in the Caledonian Room of the Holborn Restaurant, London, W.C. Mr. A. E. Hobbs, member of the Council of the Pharmaceutical Society, was in the chair, and he was supported by Mr. J. Harcombe Cuff, Mr. E. T. Neathercoat, Professor H. G. Greenish, Mr. A. Francis, Mr. E. F. Harrison, Mr. R. R. Bennett, Mr. P. E. F. Perrédès, Mr. M. W. Stranack, Mr. C. T. Allen, Mr. C. H. Hampshire, Mr. C. H. Warner, and others, the company numbering between fifty and sixty. After dinner, and the toast of "The King" having been honoured, Mr. W. Honneyman (Bell Scholar) proposed that of "The Pharmaceutical Society," to which the Chairman replied. After recounting the functions of the Society, Mr. Hobbs said that education has been in the foreground ever since the Society was established, and the best proof that the work has been successful is that all the benches in the laboratories are occupied. Referring then to the new laboratories, the speaker said that if there are any other improvements that can be made he should in the Council advocate that they be carried out. The credit of the Society rests on the students, who will be the pharmacists of the future. Having supplied the laboratories and the teaching staff, the Society confidently looks to the students to do credit to the school and to the country at large. After speaking about the organisation of the Society, Mr. Hobbs said that the value of the Poisons and Pharmacy Act would be apparent in time. It would raise the level of pharmacy and bring it to that of a professional calling with adequate remuneration. The Council is at present considering a curriculum scheme which will provide for the training of students from the commencement of their career. This scheme would eventually lessen the proportion of failures in the examinations, and would be a better proof of adequate training than is furnished by examinations alone. Mr. E. T. Neathercoat proposed the toast of "The School," at which he was a student eight years ago. A model course of study is carried through in model laboratories. Such a training has great influence on the after-life of the students, which is shown by the fact that examiners are always past-students, and many past-students become members of the Council. Professor H. G. Greenish replied, and dwelt on the fact that past-students occupy important positions all over the world. The school, it must be admitted, is successful, which is due partly to the liberality of the Council in spending money to bring the laboratories up to date. He had been obliged to refuse admission to many students, as all the benches are full. Mr. H. S. Elton proposed the toast of "The Past-Students" in a pleasantly discursive manner, and to this Mr. E. F. Harrison replied with some interesting reminiscences of his student days. A much-appreciated musical programme was contributed by Mr. Fred Curtis, Mr. Walter Phillips, Miss Zelinda Davis, and Miss Ruby Wilson.

Dinner at Halifax.

The annual dinner of the Halifax and District Chemists' Association was held at the Old Cock Hotel, Halifax, on Thursday evening, February 17. The company comprised the following:

Messrs. W. R. Black (President), H. K. Woodward, B. C. Hodgson, and J. E. Binns (Vice-Presidents), J. Swire (Treasurer), R. V. Sutcliffe (Secretary), F. P. Sargeant (Leeds), A. Hanson (Bradford), J. A. Dewhirst (Borough Analyst), T. Smith (Hirst, Brooke & Hirst, Leeds), T. Davies (Evans Sons Lescher & Webb, Liverpool), F. D. Crossley

(Oldfield, Pattinson & Co., Manchester), H. Taylor (J. F. Wilkinson, Manchester), G. Dixon, W. E. Smithies, C. Fielding, W. R. Fielding, J. W. Tiffany, W. Lumb, W. F. Murrell, T. Briggs, P. W. Swire, H. Hebden, W. Bottomley, L. Chambers, and J. A. Sutcliffe.

The toast of the "Pharmaceutical Society" was proposed by Mr. Hodgson, who said an effort ought to be made to get the word "pharmacy" protected as well as the title "pharmacist." Mr. Gibson Dixon followed with a song composed for the occasion by Mr. Henry Hebden (tune "Sentry Song" in "Iolanthe"). It ran thus:

When Councillors at Bloomsbury Square,
With closed doors sit in close affinity,
Their brother chemists would be fair
And accept their views with equanimity.
But when they find their title gone
To Jesse Boot and others of his kind,
They think it time to think upon
A change, to men who are not quite so blind.
I often think it comical, Fa la la la, Fa la la la,
How Nature somehow does contrive, Fa la la la la,
That every chemist councillor
Who reaches Bloomsbury Square alive,
Though his policy be Liberal,
He becomes a little Conservative,
Fa la la la, Fa la la la.
Though his policy be Liberal,
He becomes a little Conservative, Fa la la.
Now chemists are called pharmacists,
And do just as their leaders tell 'em to,
And give the agriculturists
The poisons, and the right to sell 'em too.
But let us hope we soon shall see,
An up-to-date progressive Bill in hand,
With good Glyn-Jones as our M.P.
To pilot it through Parliamentary land.
Then let's rejoice with loud Fa la la,
Dame Nature somehow may contrive, Fa la la,
That every future pharmacist
That's born into this world alive,
Will find Protection Liberal
Though he be a little Conservative, Fa la la la,
With an ideal Bill of pharmacy.
Whether Liberal or Conservative, Fa la la.

Mr. Clement Fielding responded to the toast. Mr. W. E. Smithies proposed "Kindred Local Associations," Mr. A. Hanson replying. The President then officially welcomed two new members, Mr. W. Lumb and Mr. L. Chambers, after which Mr. F. P. Sargeant proposed "The Halifax Chemists' Association," and Mr. P. W. Swire, in reply, said the membership had increased considerably during the past year and the Association was stronger. He suggested that Halifax chemists ought to sink a little of their individuality and do something collectively in the form of a joint proprietary preparation. He believed every chemist in Halifax is now a member of the Association. Mr. H. C. Brierley proposed the health of "The President," which was musically honoured, and Mr. Black replied. Mr. F. D. Crossley proposed "The Town and Trade of Halifax," to which Mr. H. Hebden responded. Mr. J. E. Binns proposed "The Retiring Officers," Mr. Brierley replying. During the evening songs, etc., were given by Messrs. Wyman, C. Reynolds, A. R. Hanson, Gibson Dixon, J. W. Tiffany, and L. Hampson (accompanist).

Dinner at Harrogate.

The annual dinner of the Harrogate and District Pharmaceutical Association was held at the Wellington Hotel, Harrogate, on the evening of February 11, with Mr. H. G. Mitchell (President) in the chair. Amongst those present were the following:—

Messrs. E. T. Neathercoat (member of the Pharmaceutical Council), Atkinson, Battle, and Beacher (Ripon), Eynon, Halliday, Lawrence and Watson (Knaresborough), Wilson and Hey (York), Beacock and Sargeant (Leeds), Pattison, Payton, Hines, Mote, Sol Taylor, Lambert Foster, Rogers, Woodhead, McMillan, Simpson, Parkes, Wilson (York), A. Wood, Backworth, J. Carr, Fenn (Treasurer), and C. B. Southwell (Secretary).

After the loyal toasts the Chairman gave that of "The Pharmaceutical Society," which was acknowledged by Mr. Neathercoat, who in the course of his speech referred at some length to the Mercer case, stating that the Council would exert all its power and influence with Parliamentary

legislators to secure a restriction of the word "Pharmacy" to those legitimately entitled to it. Other toasts followed, and the speech of Mr. C. B. Southwell, in giving "The Ambassadors of Commerce," caught the fancy of the audience, for it was witty, as well as caustic, the latter characteristic being reserved for graphic sketches of those visitors from the fringe of the knighthood who pester the lives of retail chemists.

"It is not with these specimens," concluded Mr. Southwell, "that the toast is associated, but with those ambassadors whom we look upon as friends and brothers, the Motes, the Parkes, the Proctors, the Sol Taylors, the Wilsons, the little Willies, and many others present with us this evening—those good, loyal, and faithful men, the representatives of the grand old wholesale houses we are all pleased to do business with; the men who never forget that they carry the reputation of their various houses in their hands; the men who do their duty to their firms and their duty to their clients; the men whose first thought naturally is time and straightforward business, and their next, friendly and social intercourse with those who do business with them—these are the men I call the true 'Ambassadors of Commerce,' and these are the men I ask you to join me in wishing jolly good health, may their shadows never grow less, may they daily increase in health, wealth and happiness, and may we have them with us for many years, friends in business, brothers in social intercourse, always ready to join in our festivities, to sing a song, or make a speech. Gentlemen, will you charge your glasses and then to your feet to toast with me 'The Ambassadors of Commerce,' coupled with the names of Mr. Parkes and Mr. Sol Taylor."

To this toast Mr. Sol Taylor made a happy reply, after which the Association itself was toasted by Mr. Sargeant, Mr. Atkinson replying. "The Visitors" was given by Mr. George Fenn, and Mr. Norfolk, of Ilkley, replied. The President was also honoured. Songs and other entertainment pieces were given in the course of the evening by Messrs. Hines, Lambert Foster, G. Weeton, Sol Taylor, F. Wilson, P. N. James, R. Proctor, A. Atkinson, C. Mote, Parkes, and Rogers. A collection for the Pharmaceutical Benevolent Fund yielded three guineas.

A Dinner at Stoke.

On Thursday evening, February 17, the members of the North Staffs Chemists' Association dined at the North Stafford Hotel, Stoke-on-Trent, Mr. Weston Poole (President) in the chair; the vice-chairs being occupied by Mr. Edmund Jones and Mr. Ernest Mellor.

After dinner and the loyal toasts, Mr. Edmund Jones submitted that of "The Pharmaceutical Society," giving in the course of an able speech some statistics of the Society. Discussing the Poisons and Pharmacy Act of 1903 with its outcomes, he specially mentioned the promise of Mr. Runciman, M.P., to support any short, non-contentious Bill introduced by the Society for the purpose of limiting the use of

THE DESCRIPTION "PHARMACY."

Mr. Young acknowledged the toast in a cheery speech, in the course of which he referred to the agitation which led up to the Poisons and Pharmacy Act, exemplifying the care which the Pharmaceutical Society had exercised in modifying the Act by reference to Clause 2, contrasting it as originally drafted with Section 2 as it stands. He then referred to the Mercer case, whereby the Council of the Society had hoped to prevent unqualified persons describing their places of business as "pharmacy," and added:

The decision in that case was the logical sequel to the decision of the Appeal Court in the dental case of *Bellerby v. Heyworth*, which laid down the ruling that it is not contrary to the Dentists Act for an unregistered person to say that he skilfully or painlessly extracts teeth, and that his place of business may, without contravention of the law, be termed a "dental office." Both these decisions are the result of interpreting the law strictly according to the letter of the statutes, without due regard to the principles which they were enacted to establish. Neither the dental nor the pharmaceutical authorities can permit the matter to remain as it is, and both are considering the best means of combating the evil of the growing use by unqualified persons of place names and descriptions implying and intended to imply possession of a qualification. (Hear, hear.) The evil is not confined to pharmacy. The medical profession, dentists, veterinary surgeons, and even the lawyers, are in much the same

boat, and if they can all be brought to see the common danger and unite in remedying it, there will be a very good prospect of a speedy and successful deliverance. The point is that the effect of the Appeal Court decision in the dental case is so widespread that it cannot be settled by spending 1,000*l.* or so in going on with the Mercer case. The public must see to it that the law devised for their protection shall be made a real safeguard against exploitation by adventurers—persons who have no sort of qualification beyond having taken high honours in audacity. It is a public matter, and a national matter, that professional qualifications involving technical training and examinations shall be rendered impregnable against ingenious inventors of synonyms. (Applause.) So long as it is treated as a public evil, and not as a purely pharmaceutical grievance, there will be reasonable ground for hope that the Government will provide a remedy. But deal with it as some of our pharmaceutical friends in the country would apparently wish us to do—that is to say, on the basis of an assumed guarantee to pharmacists by Mr. Herbert Samuel—and hope will be all that we are likely to get. (Hear, hear.)

Mr. Young then referred to the division of the Minor examination and the difficulties of arranging a curriculum which would satisfy the Boards in Edinburgh and London and all others concerned. He next spoke of the necessity for a curriculum, and indicated that he did not think it would increase the cost of education; in fact, he said, as candidates on an average take three shots at the examination, the expense may be diminished.—Mr. F. J. Gibson also replied, confining his remarks to agri-horticultural poison-licences and the Benevolent Fund. In reference to the latter he mentioned that a young man of twenty-eight was threatened by consumption, and is now being kept in a sanatorium at the expense of the fund. Mr. Edmund Jones took this as a good opportunity for passing round the plate, and 2*l.* 14*s.* 9*d.* was collected for the Fund.—The toast of "The Visitors" was proposed by Mr. D. H. Oxen, who spoke wittily, and Sir Edward Evans as wittily replied. He deprecated the pessimistic tone that is sometimes heard, and said, as regards

THE RETAIL DRUG TRADE:

In spite of the commonly reported difficulty of making a respectable living in all trades, he knew a very large number of prosperous pharmacists. His experience went to show that what they must do if they were to succeed was to watch the trend of events, and not always go on in the same old ruts. If they did this their craft would, like any other business, provide a living for those engaged in it. Some of them no doubt would say, "Oh, it is all very well for you to talk like that; you are in the wholesale trade." All he would say as to that was that if one could only do the enormous trade one had to do to-day at the enormous profits one got forty years ago, a year or two would be quite sufficient for their humble servant. (Laughter.) But this was not the case, though, without being egotistical, he might say that the firm with which he was connected had succeeded by looking ahead and embracing opportunities as they arose. It was certain that they must look more at the details of business to-day than ever they did if they were going to succeed; but if they did this, he believed there was a future for pharmacists, whether engaged in the wholesale or the retail trade. With one point in Mr. Rymer Young's speech he would most strongly associate himself, and that was that it was no use going to Parliament to ask for the protection of the individual: it was protection for the public for which they must ask, and what fell from Mr. Young's lips that night had shown upon what lines any further legislation must proceed.

Mr. W. R. Dunn also replied; then Alderman Cross submitted "The Health of the President," Mr. Poole replying. Mr. J. A. Dale gave "The Medical Profession," Dr. Allardice and Dr. Myott replying; other toasts being "The Local Governing Bodies," "The North Staffs Chemists' Association," "The Press," and "The Bachelors." Mr. Kemp and Mr. Tipper, who responded to the last toast, accepted the wager of two silk hats, made by Mr. Brimston (who proposed it), that they would not be able to reply for the bachelors next year. At the conclusion of the dinner a very hearty vote of thanks was passed to Mr. T. Bentley (Hon. Secretary) for his services during the past year. A musical programme was contributed to by Mr. C. L. Forrester, Mr. W. Brimston, Mr. Edmund Jones, Mr. Rowley, and Mr. F. A. Bloor (violin); Mr. A. S. Johnson accompanying on the pianoforte.

Westminster Wisdom.

A Record of Parliamentary Progress.

THE KING'S SPEECH.

His Majesty the King opened the new Parliament on Monday by reading the Speech from the Throne in the House of Lords. Apart from the necessary financial proposals for the public services, the Government will confine its legislative programme to proposals for defining the relations between the Houses of Parliament, so as to secure the undivided authority of the House of Commons over finance and its predominance in legislation. These measures are intended to provide that the House of Lords should be so constituted and empowered as to exercise impartially, in regard to proposed legislation, the functions of initiation, revision, and, subject to proper safeguards, of delay. This means that the House of Lords would cease to exercise the veto. Differences of opinion among the Government supporters in the House of Commons as to procedure (whether finance or veto should be first) were expressed by Mr. John Redmond on Monday evening, with the result that the real work of the Session began in a cloud of most pessimistic views as to the duration of the existence of the new Parliament. No one (writes our Parliamentary representative) desires an early appeal to the constituencies, and least of all the Nationalist and Labour parties, who are ill-equipped with the sinews of war; but, in view of the declaration of Mr. Redmond and his colleagues, it is believed in well-informed Parliamentary circles that the prospect of a further appeal to the country in the early part of the ensuing summer is quite probable.

VIVISECTION COMMISSION.

After a lapse of many weeks—the delay being due for the most part to the death of the Chairman, Lord Selby, and the General Election—the Royal Commission on Vivisection held a further meeting on Tuesday, when some progress was made with the consideration of the draft report of the Chairman.

SIR WALTER FOSTER.

The withdrawal from the Parliamentary arena of the Right Hon. Sir Walter Foster, who is retiring in favour of Colonel Seely, removes from the House of Commons one of the small band of medical men who have frequently rendered first-aid to their brother Parliamentarians. Sir Walter was at one time Parliamentary Secretary to the Local Government Board, in which department he proved himself to be a most painstaking and courteous officer.

INDECENT ADVERTISEMENTS AND GOODS.

In view of the uncertainty of the Parliamentary situation there is little probability of any departmental legislation being introduced during the present Session. Consequently the Bills which the Home Office authorities have under consideration relating to indecent advertisements and goods and the question of newspaper gambling are unlikely to see the light of day for the present at any rate. Both are founded on the recommendations of the Departmental Committee over which Earl Beauchamp presided, and which came to the conclusion that the only way to check the importation of indecent goods from abroad is by international agreement. The Committee consequently suggested that the Foreign Office should place itself in communication with the Governments of foreign countries, with a view to some such arrangement being arrived at.

CORONERS' COMMITTEE AND ANÆSTHETICS.

We are informed that this Committee, to which was referred, among other questions, that of deaths under anæsthetics, will in all probability present an interim report in the near future. It is unlikely, therefore, that any attempt will be made during the present Session to revive the Anæsthetics Bill which was introduced last Session by Dr. Cooper, M.P. This, it may be recalled, proposed to require a medical practitioner or a dentist applying for registration to submit evidence of having received practical instruction in the administration of anæsthetics; to prohibit any person not a registered medical practitioner or a registered dentist administering an anæsthetic except under certain conditions; and to prohibit any certificate

of death being given in the case of any person dying under an anæsthetic.

It is officially stated that the inquiry into the question of coroners' courts and procedure is divided into three branches—coroners' courts, anæsthetics and flannellette. The report in regard to the first-named will be issued almost immediately, whilst those relating to the question of deaths under anæsthetics and the question of "deadly flannellette" will not be long delayed.

Port of London Dues.

At the Westminster Palace Hotel, on Thursday, February 24, Viscount St. Aldwyn commenced a public inquiry on behalf of the Board of Trade in regard to the draft provisional order—and the objections lodged in respect to it—embodying the schedules of maximum port rates on goods which has been prepared by the Port of London Authority in accordance with Section 13 of the Port of London Act of last year. The large room was overcrowded with counsel, agents, and the various parties interested, and it was stated in the course of the proceedings that there are no fewer than 223 objections. Sittings will be held on Monday, Tuesday, Thursday and Friday next week, and on the same days in the following week.

In the course of some preliminary remarks the Chairman suggested that on Monday counsel for the Port Authority should commence with a general statement, and with regard to the objections, it would perhaps be convenient to take the question of transshipment first after that, followed by the questions of coastwise traffic, exports, raw materials, rebates, river trade, the method of collection of the dues, and miscellaneous subjects, and then to proceed with the schedule of rates, so far as possible grouping the different items under certain heads.

Mr. Clode, on behalf of the Board of Trade, concurred, and said that in the ordinary course they were responsible for the provisional order, but they had felt all along that the burden of proof was upon the Port Authority, and seeing that hereafter they would have to settle the form of the provisional order and the specification promoted in Parliament, they did not appear as partisans, but would content themselves with watching the proceedings.

After statements as to procedure by Mr. Fitzgerald, K.C., for the Port of London Authority, and other counsel,

Mr. Clode said that after the report of his lordship had been received, it would be for the Board of Trade to take the responsibility for the provisional order and the schedules.

The Chairman, having read out a number of the objections presented to the transshipment proposals of the Order, the proceedings were adjourned until Monday next.

The general objections deposited by the London Chamber of Commerce, on behalf of certain trade sections and associations affiliated with that Chamber, are briefly as follow:—

(a) The draft provisional order does not exempt from payment of port rates goods which are imported and afterwards re-exported and remain between the periods at which they are imported and re-exported on the premises of the Port of London Authority or in public or bonded warehouses.

(b) The draft provisional order and schedule of maximum port rates embodied therein are not so framed as to ensure that the aggregate quantity of the imported constituent materials from which an article is manufactured shall not be subject to the payment of higher rates than the manufactured article itself.

(c) The Act provides that goods imported for transshipment only shall be exempt from port rates, thus enabling manufacturers at other British ports and foreign ports to use the Port of London free of port rates. The draft provisional order does not, however, grant a similar exemption or any relief to London manufacturers who compete with such manufacturers, and the London manufacturers would therefore be placed at a serious disadvantage in their efforts to compete with their rivals in trade.

(d) The maximum port rates on goods set forth in the schedule are in many cases too high.

(e) The provisions made for the collection of port rates are unsatisfactory, and it is submitted that a system should be devised whereby such rates should be collected through ship-owners.

Trade Report and Market Review.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are obtained for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at these prices.

42 Cannon Street, London, E.C., February 24.

THERE is a continued lack of animation about the chemical and drug markets, judging from the opinions expressed in wholesale circles. In Mincing Lane the rubber boom quite overshadows other produce, and the prices paid at auction made a further record. The higher range of values for Norwegian cod-liver oil is well maintained, but offers of new in quantity are few at the moment. Lithium salts have improved several pence from recent unwarrantable low values. Cocaine in one direction has also improved, but the general position remains unaffected. Quinine appears to have lost its recent firmer tone, and the abandonment of the Batavia auctions has had no appreciable effect. Quicksilver in secondhands has eased slightly, and among chemicals the chief alteration is a decline in copper sulphate. Oxalic acid is fractionally easier. Other changes include an advance in castor oil, lemon-grass oil, and a firmer tone in turmeric and shellac. Glycerin is steadily maintained by refiners, but secondhands are easier. The principal changes are as under :

Higher	Firmer	Easier	Lower
Ammonia sulphate	Castor oil	Aloes (Cape)	Buchu
Indiarubber	Cocaine	Japan wax	Copper sulphate
Lemongrass oil	Shellac	Oxalic acid	
Lithia salts	Turmeric	Quicksilver (seconds)	
Opium			
Saffron			

Cablegrams.

SMYRNA, February 24 :—The sales of opium amount to 22 cases at an advance of 6d. per lb. Market closes very firm.

BERGEN, February 23 :—The weather continues stormy and the cod-fishing poor. The market for finest non-congealing Lofoten oil has now advanced to the equivalent of 93s. per barrel c.i.f.

NEW YORK, February 24 :—Business in drugs is quiet. Opium remains an easy market at \$5.45 per lb. for druggists' by single cases. Cascara sagrada is advancing; 7½c. per lb. is quoted. Asafetida is firm at 65c. Peppermint oil is steady at \$2 per lb. for tin oil. Hydrastis (golden seal) is also firm; and senega is steady at 60c. per lb.

London Markets.

ANTIMONY.—English regulus is quoted 29l. 10s. to 30l. 10s. per ton spot, and foreign 27l. 10s. to 28l. China crude (black sulphide) is offered at 16l. c.i.f. for shipment from Hamburg.

ARROWROOT.—At auction 100 barrels St. Vincent were bought in at 2d. per lb. for good manufacturing.

CALUMBA continues very scarce. Common washed sorts, similar to what was offered in auction to-day, are offered at 35s.

CINCHONA.—At the London auction on Tuesday two catalogues only were brought forward, the total amounting to 429 packages, of which 181 sold at the unchanged unit of ½d. per lb. The offerings comprised 48 bales Bolivian

cultivated Calisaya quill, of which none sold; 101 packages East Indian, of which 98 sold; 49 packages Ceylon, all of which sold; and 232 packages Java, of which 34 sold. The total weight of the bark was approximately 70,000 lb., of which 37,000 lb. was chiefly sold to manufacturers. The prices paid were as follows :—*East Indian*.—Red stem chips and shavings 2d. to 2½d., branch 1½d. to 1½d., root 2d. to 2½d., renewed stem chips 2½d., dark quill 2d. *Ceylon*.—Natural stem chips 2d. *Java*.—Ledgeriana stem chips ½d., root 4½d., and branch 2½d. to 3d.; succirubra branch 1½d. to 2½d. Of the 6,968 kilos. quinine sulphate in the bark, bought in at the Amsterdam auction last week, about 4,044 kilos. have since been sold. The exports of bark from Java during the first half of February amounted to 548,000 Amst. lb., against 571,000 Amst. lb. for the same period of 1909.

CLOVES.—No supplies were offered at auction. Privately fair Zanzibar are offered at 5½d. To arrive, business has been done in January-March shipment at 5½d., and February-April at 5½d. For delivery, sellers of March-May quote 5½d., and June-August at 5½d.

COCA-LEAVES were not offered at auction. Privately green Truxillo are quoted at 7d. per lb. c.i.f.

COCAINE is firmer to the extent that one maker who was offering below others has raised his price for hydrochloride from 6s. 11d. to 7s. 1d. per oz. net., which compares with 7s. 6d. to 7s. 8d., less 5 per cent., on the part of other makers.

COCULUS INDICUS for shipment from the Continent is easier, offering at 19s. 6d. to 20s. per cwt. c.i.f.

COPPER SULPHATE has further declined to 18l. 17s. 6d. to 19l. for Liverpool brands for prompt delivery, and March-April delivery to 19l. 7s. 6d. per ton.

FENNEL-SEED.—For shipment from the Continent, Levant is quoted 30s., Moravian 35s., and Galician 24s. per cwt. c.i.f., for at least ton lots.

GAMBIER.—The spot sales include ten tons of cubes at 37s. 6d. per cwt. spot.

GINGER.—Slow. At auction 70 packages Jamaica were bought in. Privately the sales in Liverpool include 70 tons Sierra Leone at 38s. 6d. to 39s.

GLYCERIN.—Although refiners steadily maintain their official rates of 99l. per ton in cases for five-ton lots on contract, second-hand holders show more disposition to ease prices. There appears to have been a reduction of 4m. in Germany in crude, and this has weakened dealers' position.

GUARANA.—The recent advance in the U.S.A. has created a demand on the Continent, from whence shipments of pipe have been made.

HENBANE.—Foreign leaves are offered at 40s. per cwt. c.i.f. for a round parcel.

HONEY.—Privately the market is quiet for practically all descriptions. There are buyers of Jamaica at 25s. c.i.f. Continent taken tale quale.

INDIARUBBER.—At auction the heavy supplies offered met with good competition at a further advance of from 4d. to 6d. on last sales rates. The highest price paid was 9s. 10½d. per lb. for fine Malay (plantation) smoked sheet. Privately the market has been very firm and prices have advanced to 8s. 10½d. for fine hard Para on the spot.

IPECACUANHA.—Privately a few sales of Matto Grosso have been made at 7s. 6d., and at the close 8s. is wanted.

LITHIA CARBONATE.—The recent unremunerative prices have now given place to a much firmer tone, as the result of a better understanding among makers. The carbonate is now offering at from 2s. to 2s. 6d. per lb., the lower price for large quantities.

NUTMEGS.—At auction 30 packages West Indian partly sold at 5½*d.* for 75's, 4*d.* for 99's, and 3¾*d.* for 141's.

OIL, BERGAMOT.—Several parcels have arrived, and further lots are about due, in consequence of which the spot market has a temporarily easier tone. Prices vary from 17s. 6*d.* to 18s. 3*d.* per lb.

OIL, CASTOR is firmer, Hull make being quoted 27*d.* per ton in barrels for first pressing for prompt delivery, free on wharf London, and for first pressing Belgian 27*d.* 10s. is quoted, ex-wharf London. In Liverpool good seconds Calcutta is offered at 3¼*d.* per lb. spot.

OIL, COD-LIVER.—Business in new Norwegian oil is somewhat difficult owing to the high prices asked and the paucity of offers in quantity. Early in the week one agent quoted new oil at 96s. per barrel c.i.f. for March-April shipment, and 86s. c.i.f. for 1909 for prompt shipment, subject to confirmation, but on Wednesday several agents of the finest brands were asking 97s. to 100s. c.i.f. for new and 93s. to 95s. c.i.f. for old. Second-hand parcels of 1909 oil on the spot have been sold at several shillings below these figures, but such lots are now close up to the above rates.

Our Bergen correspondent writes on February 21 that the cod fishing continues to be hindered by stormy weather. The reports give the following figures:

	1903	1909	1910
Catch of cod (millions) ...	4.3	4.8	4.5
Yield of cod-liver oil (barrels)...	5,200	5,000	3,450
Livers for raw oils (hect.)	2,650	2,750	2,700

The weight of the fish and size of the liver is slightly decreasing, as is usual when the fishing proceeds. The market has been somewhat excited, and speculators have increased their bids daily. The arrivals of new oil are still insignificant, and the business done is for the greater part in last year's produce. To-day's quotation for finest non-congealing Lofoten is equal to 97s. 6*d.* per barrel c.i.f. London. The exports from Bergen up to date amount to 1,508 barrels, against 2,069 barrels at the same date of last year.

OIL, LEMONGRASS.—The spot price is now from 3*d.* to 3¼*d.* per oz., and to arrive business has been done at 2½*d.* c.i.f., but the quotation for shipment is now uncertain in the absence of offers; fairly moderate quantities have changed hands recently. In the drug-auction 19 cases Cochin sold without reserve if pay charges, at from ¼*d.* to ⅔*d.* per oz. The analysis gave 38 per cent. of citral, and 61.68 of geraniol.

OIL, ORANGE, has been in more demand, sales being reported at from 6s. 3*d.* to 6s. 6*d.* c.i.f.

OIL, VETIVERT, continues very scarce, and for a small lot of Bourbon 11s. per lb. net. is asked.

OILS (FIXED).—*Linsced* is practically unchanged on the week, at 33s. 6*d.* spot in pipes and 33s. 9*d.* in barrels. *Ceylon Coconut* is steady on the spot at 42s. 3*d.*, and at 45s. for Cochin, forward prices being easier. *Cottonseed* is firmer at 28s. 6*d.* for crude on the spot, 29s. 9*d.* for ordinary pale refined, and 32s. 6*d.* for sweet refined. *Rape* is quoted at 26s. 6*d.* on the spot for ordinary brown crude, and 23s. 6*d.* for English refined in casks. *Soya-bean* oil is rather firmer at 27s. 3*d.* naked on the spot. *American Turpentine* on the week shows no material change, closing at 42s. to 42s. 3*d.* on the spot. *Petroleum* is unaltered.

OPIMUM has advanced about 1s. per lb. since last week in primary markets, and the tone at the close is strong; up to 14s. 8*d.* has been paid in Smyrna for the usual manufacturing qualities. Persian is also firm at from 16s. 6*d.* to 17s. 6*d.* per lb. spot, according to test, with sales within the quoted rates. March-April shipment remains at 17s. 6*d.*, but without buyers.

A Smyrna correspondent writes on February 11 reporting a material decline in prices following on one at Constantinople. The favourable weather reports in the opium-growing districts have also helped to bring about the easier situation. American buyers came forward yesterday and bought 33 cases selected Karahissar, new and old, at from 13s. 7*d.* to 14s. Position, however, is firm, as speculators came forward, but with the exception of six cases at 2*d.* advance, they were unable to secure anything further. The opinion is that the U.S.A. will continue buying, and very likely we shall again see a shilling advance in the near future, owing to depleted stocks. As regards the crop, everything is going on well at

present. The arrivals to date amount to 1,899 cases, against 2,010 at same period last year. Writing on February 12 a Smyrna correspondent states that the sales amount to 38 cases Karahissar at piastres 125, or equal to 13s. 9*d.* c.i.f. for American account. The fall was provoked by the sale of 130 cases at Constantinople at about 125 piastres. The majority of holders refuse to sell at these prices, as the decline seems premature, and it is generally hoped that the lightening of the stock will improve the situation, as there is still four months to the next crop, which might at the last moment disappoint the calculations of even the best informed, as was the case with the last crop.

PEPPER (BLACK).—No supplies were offered at auction; privately the demand is slow, fair Singapore offering at 4¼*d.* per lb. For arrival, the market is steady, sales including March-May shipment at 3½*d.*, and buyers of April-June at 3½*d.* c.i.f., d/w.

PEPPER (WHITE).—At auction 132 bags Muntok were bought in at 7¾*d.* for good. Privately fair Singapore is quoted on the spot at 6¾*d.*, and to arrive sales of March-May shipment are reported at 6¾*d.*, and April-June at 6½*d.* c.i.f.

PIMENTO.—Quiet. At auction 45 bags fair were bought in at 2½*d.*, and privately sellers of distant shipment quote 19s. 9*d.* per cwt. c.i.f.

QUICKSILVER is easier from second-hands at 9*d.* 6s. per bottle, the importer's price remaining at 9*d.* 10s.

QUININE remains quite inactive at from 7*d.* to 7¼*d.* per oz. spot for German sulphate in bulk from second-hands. Amsterdam is quoted at 7*d.*, and Java 6½*d.*

The exports of "quinine, quinine salts and combinations" from Germany during the twelve months ending December were as follows:—

	1907	1908	1909
Kilos. ...	182,200	172,100	166,900
Marks ...	4,922,000	4,130,000	4,006,000

The export values for 1909 are to a large extent *declared*, whilst those for previous years are mainly based on official unit valuations.

RHATANY.—Payta or Peruvian description is offered at 5½*d.* per lb. c.i.f.

SCAMMONY ROOT.—Mexican of high-test is scarce, but a few tons analysing about 12 per cent. resin are available in Hamburg at 24s. per cwt. c.i.f.

SHELLAC is firmer, with a steady trade doing on the spot on the basis of 68s. to 69s. for fair free TN orange. For arrival, 70s. c.i.f. is quoted for TN first hands for March-April shipment. Futures are also dearer, but closed on Wednesday below the best. The sales include fully 1,000 cases TN, comprising March at 70s. to 70s. 6*d.*, May at 71s. 6*d.*, and August at 73s. to 74s.

TURMERIC is dearer, up to 20s. per cwt. being asked for good Madras finger on the spot; bulbs have been sold at 15s., and split Cochin bulbs at 14s. per cent.

WAX, JAPANESE, is easier, with spot sellers at 41s. 6*d.* per cwt.

London Drug-auctions.

Although only new drugs were offered to-day the demand proved spiritless and the sales were concluded in a little over an hour. The price alterations with so uninteresting a sale naturally proved few; they included an easier feeling in Cape aloes, buchu, and cardamoms. Cascara is firmer in U.S.A., but hero the undertone is still easy. Sumatra benzoin is neglected. Dragon's blood is steady for fiery lump. Honey offerings were trivial. Ipecacuanha remains firm. Rhubarb and grey Jamaica sarsaparilla sold without material alteration, the latter being firm. Beeswax offerings lacked interest. The table below shows the quantity of goods offered and sold.

Offered Sold			Offered Sold		
Aeonite (Jap.).....	10	0	Buchu	20	2
Aloes—			Calumba	9	*9
Cape	50	40	Cannabis indica...	11	0
Curaçao (gourds)1352	2	2	Cardamoms	102	75
Socotrinc (kegs)	29	0	Cascara sagrada ..	343	0
Zanzibar (cs.) ...	17	0	Cascarilla	9	0
Amberggris (pcl.)...	1	0	Cashew-nuts	51	0
Ammoniacum	14	0	Cinchona	12	0
Balsam—			Colocynth & pulp	21	5
Peru	8	0	Cuttlefish-bone ...	42	0
Benzoin—			Dragon's-blood ...	19	8
Sumatra	78	14	Ergot.....	6	0

	Offered	Sold		Offered	Sold
Galls (Pers.).....	5	0	Orange-peel	49	8
Gamboge	13	0	Orchella-weed.....	51	0
Gum acacia	127	0	Orris—		
Honey—			Mog.	7	0
Jamaica	6	2	Rhubarb—		
St. Lucia	8	3	China	46	7
Ipecacuanha—			Sarsaparilla—		
Cartagena	8	0	Grey Jam.	26	26
East Indian	6	6	Native	9	7
Matto Grosso	2	*2	Seedlac	53	0
Kamala	1	0	Senna and pods—		
Mastich	22	0	Alex.	13	0
Myrrh	58	0	Timevelly	11	11
Nux vomica	391	0	Sticklac	14	14
Oil—			Wax (bees')—		
cananga.....	2	0	Aden	15	15
citronella	20	0	East Indian	22	7
eucalypt.	39	0	Jamaica	3	0
lemongrass	19	19	Nyasaland	3	0
lime	2	2	West Indian	1	0
orange	1	0	Zanzibar	37	0
Olibanum	4	4			

* Sold privately.

ALOES.—Cape, the only description in demand was about 1s. per cwt. easier; Mossel Bay, on 20-per-cent. tares, realising 32s. 6d. for good bright hard firsts, 31s. 6d. to 32s. for fair seconds, slightly drossy to good seconds, and 28s. to 29s. for partly livery to ordinary dullish. A good selection of Zanzibar aloes in skins was offered, the broker intimating he would take 65s. for the first three lots, consisting of good hard hepatic; 52s. 6d. was refused for ordinary part soft and dark, more skinny. Socotrine in kegs was held at 85s. to 90s. for stiff pasty to good hard. A lot of 1,362 Curaçao gourds offered; for medium to bold gourds, of fair quality, rather dark, the nominal buying-in price was 65s., rather course capey was bought in at 55s.; pieces and broken and empty gourds realised 31s. Privately Curaçao in cases is firm in the U.S.A., from whence 36s. c.i.f. is quoted, while here good liver is almost unobtainable.

AMMONIACUM.—Quiet; 14 packages were bought in; for small to medium seedy drop, rather darkish, 60s. was refused, and also 67s. 6d. for pale block; quality was not so good as that offered a fortnight ago.

BENZOIN.—Sumatra description only offered, 10 cases of which changed hands at 7l. 10s. per cwt. for good almondy seconds, and for four cases fair ditto 6l. 15s. was paid.

BUCHU.—The *Kinfauns Castle* has brought 63 bales, but the bulk is in transit as usual. Privately 2s. c.i.f. is quoted for immediate shipment from Hamburg, but business for shipment from the Cape has been done at considerably less. In the drug-auction 11 bags of brownish to greenish ovals were limited at 10d. to 1s., and for 2 bags good green round 2s. was paid, being a decline of 3d. on last sale rates.

CANNABIS INDICA.—The price of fair clipped green Bombay tops remains at 4s. 6d. per lb.

CARDAMOMS.—The small offerings of Ceylon-Mysorees were disposed of at slightly easier rates, 73 cases finding buyers, comprising: extra bold palish, few open, 2s. 4d. to 2s. 5d.; medium palish, ditto, 2s.; small palish, 1s. 8d. to 1s. 9d.; tiny palish, 1s. 5d.; brown split and pickings, 1s. 3d.; seed sold at 1s. 7d.

CASCARA SAGRADA.—The *s.s. Oanfa* from Tacoma has arrived with 1,805 bags to London. In auction 118 bags of 1906 crop were offered, and a bid of 34s. 6d. is to be made for part, consisting of rather thick quilly bark; a further 225 bags of fair one year old were limited at 36s.

CASHEW NUTS.—A parcel of 51 bags sifted, but rather husky, were bought in at 45s.

COLOCYNTH.—Ten cases of small to bold pale Turkey apple were bought in at 1s. nominal—a bid of 6d. being refused; five cases of slightly damaged and off-colour apple sold at from 4d. to 5d. per lb. without reserve.

DRAGON'S-BLOOD.—Partly sold at steady rates, 6 cases of fine, bright, fiery, Singapore lump changing hands at

11l. 10s.; two cases fair pickings from this pile sold at 7l. 10s.; and 4 cases of common, dull, and damp lump were bought in at 6l.

ERGOT.—Six bags fair sound Russian were held at 1s. 5d.

GAMBOGE.—Quiet. The offerings included 3 cases good bright Singapore pipe, slightly blocky, for which 14l. 10s. was wanted.

GUM ARABIC.—Quiet. At auction 90 cases Aden were held at 30s. for fair reddish and amber sorts; 26 packages of small, dusty, brown Barbary were limited at 28s., and for a case of Trieste picked grain, the buying-in price was 90s.

HONEY.—The offerings were quite insignificant, and included 8 cases St. Lucia, which sold at 24s. for setting brown. A single barrel of similar quality of Jamaica also sold at 24s., and another barrel at 32s.; 115 cases of California had not arrived in time for the sale.

IPECACUANHA.—Firm. Only two bales Matto Grosso were catalogued, but were sold prior to the auction at 7s. 6d. Six bales East Indian of good quality were offered without reserve and sold at 7s. 5d. per lb., a bale of siftings going at 6s. 9d. Six bales Cartagena were firmly held at 5s. 6d.; privately 5s. 4d. appears to have been the highest price paid. (See also p. 337.)

MYRRH.—Privately business has been done in Somali sorts at 55s. Good Aden sorts is quoted from 72s. 6d. to 75s., and 6l. for Aden picked, the price for Somali picked and sifted being 5l.

OIL, CANANGA.—Two cases Java were limited at 9s. per lb.

OIL, CITRONELLA.—Five cases Java were bought in at 2s. per lb., and 15 cases Singapore (containing 80 per cent. of geraniol and citronella) were also bought in at 2s. Ceylon in cases is quoted 1s. 1½d. and drums at 1s. per lb.

OIL, EUCALYPTUS.—Ten cases, analysing 76 per cent. eucalyptol, were bought in at 1s. 1d. per lb.; 19 cases of citriodora were held at 3s. per lb.

OIL, LIME.—A single box of hand-pressed Dominican sold at 5s. per lb. subject, and one of good distilled from St. Lucia realised 1s. 6d.

OLIBANUM.—Four cases Aden were offered and sold at 45s. for fair small drop, 35s. for pale pea-sized drop, 22s. 6d. for good garblings, and 16s. for pale siftings, all subject to sellers' approval.

ORANGE PEEL.—Only small sales of Tripoli strip were made at 4½d. for fair, and 5 packages without reserve sold at 1½d. for fair strip tainted with oil; good was bought in at from 6d. to 7d.

RHUEARB.—Quiet. Two cases good Canton pickings, round and flat, with three-quarter fair pinky fracture, part spongy, sold at 11d. to 11½d. per lb. A case of medium round Canton, with two-thirds pinky fracture, sold at 1s. 1d., and for small round ditto, part trimming root, with fair pinky fracture, 1s. 2d. was paid. Two cases also sold without reserve, including good, round Shensi pickings, at 1s. 4d., and flat ditto at 1s. 3d. per lb. Medium flat High-dried, with three-quarter palish pink fracture was held at 1s. 1d.; 55 cases have arrived per *Idomeneus*.

SARSAPARILLA.—Firm; of grey Jamaica 26 bales offered and sold, comprised fair part coarse to good fibrous, 1s. 2d. to 1s. 3d., and ordinary (2 bales), 1s. 1d. Seven bales native Jamaica sold at from 10d. to 11d. per lb. for fair red.

SENNA.—The unusually small quantity of 11 bales Tinnevely offered and sold at 1½d. for ordinary yellowish and sea-damaged; a single bale of boldish green sold at 3d., and a bale of medium at 2½d.

STICKLAC.—Fourteen packages sold, comprising ten cases good off stick at 45s., dust at 35s., and block at 32s. per cwt.

WAX (BEES').—Quiet. The chief sale was one of 15 bags of good yellow Aden, which realised 6l. 15s.; 7 cases of ordinary darkish Bombay sold at 6l. 5s.; 3 packages of Jamaica were bought in at from 7l. 10s. to 7l. 15s.; and 15 cases of dull to fair bleached Calcutta from 7l. 10s. to 7l. 12s. 6d.

Heavy Chemicals.

The condition of the heavy-chemical market continues much the same as indicated in recent reports. There is a fairly steady demand on contract account, but the volume of actual new business, both on prompt and forward account, is rather disappointing.

SULPHATE OF AMMONIA.—This market is at present very firm, both on prompt and forward account, and a further improvement has occurred in values since last writing. This has been partially due to the presence of new business from abroad, and partially to the covering of this month's requirements. Present nearest figures are: Beckton prompt, 12*l.* 2*s.* 6*d.*; Beckton terms, 11*l.* 13*s.* 9*d.* to 11*l.* 15*s.*; London, 11*l.* 13*s.* 9*d.* to 11*l.* 15*s.*; Leith, 12*l.* to 12*l.* 2*s.* 6*d.*; Hull, 11*l.* 16*s.* 3*d.* to 11*l.* 18*s.* 9*d.*; and Liverpool, 11*l.* 18*s.* 9*d.* Forward transactions are limited, owing to the higher prices asked by manufacturers.

ALUMINA-PRODUCTS are steady, both as regard demand and values. There are no fluctuations of moment. Crystal alum lump, 5*l.* 5*s.* to 5*l.* 12*s.* 6*d.*; lump in tierces, 5*l.* 10*s.* to 5*l.* 17*s.* 6*d.*; and ground in bags, 5*l.* 15*s.* to 6*l.* 2*s.* 6*d.* per ton free on rails Yorkshire and Lancashire or f.o.b. Hull, Goole, or Liverpool. Sulphate of alumina, purest qualities, practically free of iron, ordinary strength, 4*l.* 12*s.* 6*d.* to 5*l.* 2*s.* 6*d.* per ton in casks, with customary extras for similar pure quality in higher concentrations, and usual allowances for bags and loose slabs. Aluminous cake, 50*s.* to 57*s.* 6*d.* per ton, and aluminous ferric, 50*s.* to 57*s.* 6*d.* per ton, according to quality, quantity, and condition. Hydrate of alumina, purest quality and high strength, Al₂O₃, 12*l.* 10*s.* to 13*l.* 10*s.* per ton free on rails in large casks. Special pulp hydrate of alumina, 15*s.* to 17*s.* 6*d.* per cwt., c.i.f. Special pulp quality, dried and in lumps, 35*s.* to 37*s.* 6*d.* per cwt. c.i.f., and ground, 37*s.* 6*d.* to 40*s.* per cwt. Aluminate of soda, purest quality and high strength, Al₂O₃, 27*s.* 6*d.* to 30*s.* per cwt. Carbonate of alumina, 32*s.* 6*d.* to 35*s.* per cwt.

Manchester Chemical-market.

February 22.

While there is a continuance of the quiet feeling in heavy chemicals noted last week, caustic soda still commands a premium for early delivery, but 70 to 72 per cent. can be bought for April delivery onwards at 9*l.* 15*s.* per ton on rails Widnes. Caustic potash commands late rates, but there is a better demand for carbonate, and a good spot business is reported. Refined German, 90 to 92 per cent., is 16*l.* 10*s.* per ton Hamburg, and Russian is 16*l.* to 16*l.* 10*s.* net, ex store Manchester. Glycerin is rather easier, demand being slow, but there is no appreciable weakness in the market. Good 80-per-cent. crude is about 58*l.* to 59*l.* per ton, and commercial white, s.g. 1.260, 90*l.* to 92*l.* on rails makers' works. Sulphate of copper unsteady. Greases are very scarce. In castor oil, English crushers are still cheap sellers, but Continental and Indian remain steady. English, 25*l.* to 26*l.* per ton on rails Hull; French, 27*l.* 10*s.* to 28*l.* 15*s.* per ton f.o.b. Marseilles; Indian, good seconds, Calcutta, in cases, 3*l.* 3*d.* to 3*l.* 5*d.* per lb. ex store Liverpool. German farina is lower, owing to a "bear" movement, but Dutch keeps firm. Paraffin wax, 120° to 122° white American, due shortly, 11*l.* 12*d.* ex quay Manchester; Scotch, S.R., 110° to 112°, 2*l.* 7*d.*; 118° to 120°, 2*l.* 4*d.*, in slabs, cases, delivered Lancashire and Yorkshire. Italian green olive-oil soap, prompt, testing 56 to 58 per cent. (when shipped), in bars, cases, 20*l.* per ton ex store Liverpool, 2 to 10 ton lots, shipping weights. Coal-tar products are a shade quieter. Sulphate of ammonia is quoted 11*l.* 6*s.* 3*d.* to 11*l.* 7*s.* 6*d.* per ton on rails Manchester.

American Drug-market.

New York, February 15.

Business in the New York drug-market has been fairly good during the interval, but the turnover falls short of earlier expectations, and disappointment is expressed in several quarters.

ALOES.—Curaçao in boxes is in good request, and prices are firm at 7*c.* to 7½*c.*, according to quantity. Cape and gourd are quiet at former prices.

ASAETIDA.—Present stocks are unequal to current demand, and prices are firm at 65*c.* to 75*c.* for U.S.P., the latter figure being usually named. Owing to the pronounced scarcity in all markets of drug entitled to admission here, the present range of prices may be expected to continue.

CANADA BALSAM is moderately active at \$5.25 per gal. Oregon sells in a limited way at \$1.

CASCARA SAGRADA.—Following sales of several car-loads at primary sources, prices strengthened somewhat, and 5½*c.* f.o.b. coast is now considered an inside quotation. The improved primary position is attributed to closer control of stocks and a more active demand. Spot prices are unaltered at 7*c.* to 8*c.*, but a much firmer tone prevails.

COPAIBA continues in fair demand at the former prices of

42½*c.* to 45*c.* for C. and S. American of guaranteed purity. Para is the turn easier at 49*c.* to 55*c.*, owing to slow demand.

DAMIANA has been in quieter demand of late, but under the conditions of scarcity and control prices remain firm at 45*c.* to 50*c.*

HYDRASTIS continues in fair request, and values are steady at \$2 to \$2.10, as to quality and dealer. The quality of some of the offerings is very poor, and it is doubtful whether first-class drug can be obtained under \$2.10.

IPECAC. is generally quoted at \$1.10 for Cartagena, but with higher values in prospect. Rio is very scarce, and \$1.85 "to arrive" is quoted. Demand for this latter variety is very limited here, values being based on total alkaloid-content only.

OPIMUM continues slow of sale and 20*c.* lower at \$5.45 for case lots. The tendency of prices is distinctly easier in sympathy with primary advices. Morphine and codeine are quoted at former prices.

PEPPERMINT OIL (AMERICAN).—"Tin" oil is following a routine course on spot, with prices well maintained at \$2 to \$2.10, as to quantity. The primary position is generally regarded as being fairly stable, with prices firm, but in some quarters doubt is cast on the ability of primary dealers to hold their stocks, owing to the absence of speculative demand in secondary markets and in view of the approaching crop.

Java Quinine Auctions.

The fact that no auctions of quinine in Batavia were held in January or February has given rise to the report that they have been abandoned, but in the absence of any official statement by the Bandong Quinine-factory this cannot be said with certainty.

Sicilian Citrate of Lime.

The "Giornale di Sicilia" states that since October 25, 1908, when the export tax came into operation, 7,005 tons of citrate of lime have been deposited in the warehouses of the "Camera Agrumaria," of which 500 tons were carried over from the previous season. Of these, 1,500 tons had been sold up to June 30, 1909, at 481 lire per cask, or 157 lire per 100 kilos. A further 1,547 tons were sold in December last at the same price, less a discount of 4 per cent., and 3,958 tons then remained as deposits in stock. The production of the current season is estimated at 4,500 tons.

New Artificial Indigo Company.

It is stated that a new company, with a capital of three million marks, has been formed in Hamburg to take up the manufacture of artificial indigo, working the patents of Dr. Arnold Rahtjens. Trials of the new process have been carried out on a commercial scale at the works of the Altona Wax Bleaching Co. It is not intended to manufacture the raw acids required, but arrangements have been made with the Saccharinfabrik vorm. Fahlberg, List & Co., of Salbke-Westerhuen, to supply these. Should it later be decided to erect plant for the preparation of these acids, the capital of the undertaking would be correspondingly increased.

Ceylon Citronella Oil.

The exports of citronella oil from Ceylon during 1909 showed an increase of 236,119 lb., being 1,512,084 lb., against 1,276,965 lb. in 1908. The leading destinations were: United Kingdom, 780,049 lb.; the United States, 446,874 lb.; Germany, 172,302 lb.; Australia, 45,411 lb.; and France, 42,201 lb. The increase last year is probably a record, and is attributed to new producing districts opened up in the South of Ceylon. It should be pointed out in connection with the above statistics that, although this country still figures as the principal consumer of citronella oil, important quantities credited to England are destined for shipment to Germany and the U.S.A. via London. The largely increased exports would seem to suggest that, although adulteration is rampant, the oil does not lose any of its popularity. As the adulteration question has become so acute, it is now stated that both consumers and importers are seriously considering the advisability of altering the terms of sale, and selling only pure citronella oil guaranteed to contain a definite amount of geraniol and citronellal. It is well known that the Ceylon oil in drums is always adulterated down to pass Schimmel's test, but it is stated that during the past month or so some Ceylon shipments have proved of a very inferior character, and have failed to pass Schimmel's test, the consequence being that buyers have refused to accept delivery of such tenders, and in other instances heavy allowances have been made. These allowances have, of course, called a protest from Ceylon shippers, while on this side a movement is on foot with a view to place the citronella-oil business on an entirely new basis as regards quality—i.e., in future pure oil only will be accepted against arrival contracts. Whether the movement will be successful, it is difficult to say, inasmuch as the shipper is entirely in the hands of the native distiller or dealer.



Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they are not recorded.

Queries by subscribers on dispensing, legal, and miscellaneous subjects pertaining to pharmacy and its allied trades are replied to in these columns, if they are of general interest.

Letters submitted to the Editor for publication (if suitable) should be written on one side of the paper only. Their publication in the "C. & D." does not imply our agreement with the opinions of the writers.

Essential Oils of the Pharmacopœia.

Sila.—We have read with interest the paper on this subject by Messrs. Hill and Umney, as published by you on February 12. As we have had considerable experience in the manufacturing and testing of the various oils referred to, we venture to append the result of our experience where this differs from the suggested figures contained in the paper.

Oil. Anethi.—Our experience of various batches of oil distilled by ourselves is that the S.G. varies from 0.912 to 0.915. The suggested limit of 0.900 to 0.910 therefore appears to us to be too low, and a range of 0.902 to 0.915 would appear to include all genuine oils with a high carvone content.

Oil. Anisi.—In our experience a range of S.G. from 0.978 to 0.990 has included all genuine oils.

Oil. Cajuputi.—We have had genuine oils with a S.G. of 0.918 possessing a high cineol content. We think that this should be the minimum figure, rather than 0.919, as suggested. On the other hand, a S.G. of 0.930 seems unnecessarily high. In our experience, 0.925 would include all normal oils.

Oil. Caryophylli.—S.G. 1.070 appears to us to be unnecessarily high, and we would suggest a range of 1.047 to 1.065. We may also say that we have never found an oil of our own distillation with a lower phenol content than 84 per cent., and the average of our distillates works out at over 85 per cent.

Oil. Cinnamomi.—We suggest that 50 to 70 per cent. of cinnamic aldehyde and a S.G. of 1.020 to 1.035 would more nearly approximate the figures to be obtained from genuine oils than those suggested.

Oil. Copaiba.—The range in S.G. of oils distilled from various varieties of this are set out at length in our "Analytical Notes" for 1909, and, in our opinion, a limit of optical rotation from -10° to -35° and S.G. of 0.893 to 0.910 would include oils obtained from normal samples of balsams of various varieties, which at present, at any rate, are of commercial interest.

Oil. Coriandri.—In our experience the S.G. 0.870 to 0.880 would cover all normal samples of this oil.

Oil. Cubeba.—We find the S.G. to vary from 0.915 to 0.930.

Oil. Lavandula.—The limit 30 per cent. esters for foreign oil seems rather high. We have, in some seasons, had genuine oils of good quality as low as 28 per cent.

Oil. Pimenta.—In our experience the S.G. of this oil does not rise above 1.050.

Oil. Rose.—In our experience a S.G. of 0.853 to 0.862 and refractive index of 1.458 to 1.466 are the widest legitimate variations for authentic oils.

Oil. Santali.—The rotation of genuine oils frequently falls as low as -15° , and occasionally as low as -14° . The santalol content of genuine oils, in our experience, is not less than 92 per cent. We have also found that oils distilled by ourselves which have been in stock for some little time have required a temperature of 21°C . to yield a clear solution in six volumes of 70-per-cent. alcohol.

Oil. Aurantii.—The combined monograph does not entirely cover the variations of the bitter and sweet oils. The S.G. of bitter oil rises to 0.854, and the optical rotation of the sweet oil extends to $+99^{\circ}$. If a combined monograph is to be adopted, we would suggest that the S.G. be made 0.847 to 0.854 and the optical rotation $+92^{\circ}$ to $+99^{\circ}$.

Yours truly,

EVANS SONS LESCHER & WEBB, LTD.
J. HERBERT EVANS, Director.

Liverpool, February 22.

SIR,—The few remarks by "Xrayser II." in your issue of February 19, should provide food for thought to many a consumer of essential oils. Taken together with the letters by Messrs. J. and G. Miller and Mr. W. H. Simmons on p. 304, the user of oils cannot fail to wonder if it is not possible to find some standard for such oils.

At present if there is a dispute about the genuineness of an oil, the parties concerned often know that the oil is wrong, but the "figures are right"! Little or no notice is taken of the opening of the monograph, such as, "the oils distilled from *Lavandula vera*." The oil is not tested with the nose. The physical constants are everything; and the matter is dropped. I believe the obvious solution of the difficulty is that more attention should be paid to the beginning of the monograph, viz., "The oil is distilled from . . .," and to the odour. If an oil undoubtedly impure cannot be condemned on these two scores, because the physical constants are right, then the latter are worse than worthless; they are a hindrance to the possibility of getting pure B.P. oils. The necessity of considering the tests and characters, as of quite minor importance, is shown by comparing the monographs by Messrs. Hill and Umney for the new B.P., with those in the B.P. 1898. To mention only a few of the oils which I handle to some extent, I have found that the B.P. 1898 figures for oils of cajuput, lavender, lemon, peppermint, and nutmeg, and otto of rose, exclude some of the best oils coming into the market. As there are, therefore, many factors which can cause the physical constants to vary, these should be subject to revision or alteration at short intervals, before a further Pharmacopœia appears. Already many suggestions have been made by people qualified to speak on the matter, and who differ from Messrs. Hill and Umney. Thus, in the case of lemon oil, one of the oils most largely used, it is stated that it should contain at least 3.5 per cent. of citral, and the "merits of the various processes for the determination of citral in lemon oil are at present under investigation." In the case of otto of rose several expert chemists were a short while ago refusing to pass as pure oils with sp. gr. over 0.858, and now we have it suggested here that the limit of 0.862 is admissible. If, therefore, it is considered necessary to add tests and characters at all, they should be considered merely as suggestions, but not as the only criterion, as at present. The botanical origin and the odour of the oil should be the chief guide, and in regard to tests and characters, the chemist should be free to make use of the most advanced knowledge available. I beg to make a few remarks on the figures suggested:

Eucalyptus Oil.—If the cineol is the valuable constituent for medicinal purposes, I do not think that a percentage of 70 per cent. would be too low as a minimum.

Juniper-berry Oil.—If the cheap Hungarian "by-product" is useful medicinally, it is certainly necessary to reduce the specific gravity from 0.865 to 0.862; as it is, much oil is adulterated with turpentine to bring it up slightly. If the "pure" oil is required, the lower limit may be put down as very much higher than 0.860.

Lavender Oil.—A limit of ester percentage of 30 per cent. would exclude innumerable pure oils, some of the finest of which have as low a content as 22 per cent.

Peppermint Oil.—In view of the decreased solubility of American oils it will probably soon be necessary to re-distil all oils if a solubility of one volume in four volumes of 70 per cent. alcohol is required.

Otto of Rose.—I fail to see why a lower limit of 0.855 is placed. In 1905 and 1906 many of the finest oils tested 0.853 to 0.854, and they have been known to go two or three points lower.

Rosemary Oil.—Many pure oils have a lower gravity than 0.900, and 0.895 or 0.897 should be allowed.

Yours truly,

W. NAUMANN.

63 Bartholomew Close, E.C., February 23.

James Boulton & Co., Ltd., v. Towers.

SIR,—We should be obliged if you would make it clear in your next issue that Mr. Towers had all along—that is to say, before the action was brought and afterwards—denied that he gave any order at all to the plaintiffs, and was prepared to give evidence to this effect if the case had gone on. Moreover, he had a witness in court to corroborate him on this point.

Yours truly,

NEVE, BECK & KIRBY.

21 Lime Street, E.C., February 19.

Pharmacists' Parliamentary Representation Fund.

SIR,—I am enclosing a complete list of the names of the subscribers to the Parliamentary Fund, and shall be glad if you can find room for its insertion in your valuable journal. It will be observed that a large number of our fellow-

craftsmen have recognised the desirability of the direct representation of pharmacy in Parliament. This has become increasingly desirable now that we have lost the valuable services of Mr. Idris; and in view of the general consensus of opinion that another general election cannot be far off, may I state that the Pharmacists' Representation Committee has a nucleus in hand which, together with the annual subscriptions which have been promised, will be available for another contest, but will not be sufficient? May I ask any of your readers who will further help us in this matter to let me hear from them?

I am, dear sir, yours faithfully,

W. J. UGLOW WOOLCOCK,

17 Bloomsbury Square, W.C.

Secretary.

We cannot spare the space this week for Mr. Woolcock's list of names, but we give the names of the towns in which the subscribers reside, with the number who have subscribed in each town:—

Aberchirder, 1.	Godalming, 2.	Penicuik, 2.
Aberdeen, 3.	Goole, 1.	Peterborough, 7.
Alcester, 1.	Goring, 1.	Plymouth, 5.
Ammanford, 1.	Gravesend, 1.	Portsmouth, 1.
Arbroath, 7.	Grayshott, 1.	Portsoy, 1.
Ashford, 1.	Greenwich, 7.	Ripley, 1.
Ayr, 1.	Grimsby, 1.	Rochdale, 1.
Banff, 3.	Guildford, 3.	Rotherham, 4.
Bardsley, 1.	Halifax, 11.	Rutherglen, 1.
Barnsley, 3.	Hampton Hill, 1.	St. Columb, 1.
Bath, 16.	Hanley, 2.	St. Leonards-on-
Bebington, 1.	Haslemere, 2.	Sea, 1.
Bexhill, 1.	Haverfordwest, 2.	Salisbury, 1.
Birkenhead, 62.	Hay, 1.	Sandbach, 1.
Birmingham, 16.	Hebden Bridge, 1.	Saundersfoot, 1.
Blackpool, 14.	Heckmondwike, 1.	Sheffield, 18.
Blaenau Ffestiniog, 1.	Higgs Park, 1.	Shrewsbury, 1.
Blairstown, 2.	Hornsea, 1.	Sidecup, 1.
Blairgowrie, 2.	Hounslow, 2.	Sleaford, 1.
Blairford, 7.	Hoyland, 2.	Smethwick, 9.
Boston (Lines), 1.	Huddersfield, 1.	South Africa, 1.
Bourne, 1.	Hull, 38.	Southampton, 3.
Bournemouth, 1.	Kidderminster, 1.	Southport, 4.
Bradford, 34.	Kilmarnock, 3.	Spalding, 1.
Bridgenorth, 1.	Kilworth, 1.	Stamford, 4.
Bridgewater, 1.	Kirkcaldy, 1.	Stockport, 29.
Brighton, 4.	Lancaster, 1.	Stockton, 1.
Bristol, 2.	Leamington, 3.	Stourbridge, 4.
Bromley, 1.	Ledbury, 1.	Stourport, 3.
Cambridge, 6.	Leeds, 1.	Stratford-on-
Cantebury, 3.	Leek, 1.	Avon, 1.
Cardiff, 30.	Leicester, 3.	Strood, 1.
Carlisle, 11.	Lincoln, 1.	Sunderland, 2.
Chard, 1.	Liverpool, 3.	Surbiton, 4.
Chester, 10.	Llanbadach, 1.	Tamworth, 2.
Codnor, 1.	Llandudno, 2.	Tewkesbury, 1.
Coventry, 2.	Llanelli, 1.	Thornbury, 1.
Cranleigh, 1.	Llangotten, 1.	Thrapston, 1.
Croydon, 1.	London, E., 36.	Torrington, 1.
Cullen, 2.	London, N., 48.	Twickenham, 4.
Darwen, 1.	London, S., 81.	Uppingham, 1.
Derby, 10.	London, W., 60.	Uttrother, 3.
Dewsbury, 2.	Loughborough, 1.	Wadhouse, 1.
Doncaster, 13.	Ludlow, 1.	Walsall, 9.
Dover, 4.	Lye, 1.	Walton-on-
Driffild, 1.	Macclesfield, 1.	Thames, 2.
Droitwich, 2.	Macduff, 2.	Warrington, 7.
Dublin, 1.	Maidstone, 2.	Watford, 7.
Dudley, 2.	Malvern, 1.	Wath-on-Deane, 1.
Dundee, 1.	Manchester, 5.	West Bridgford, 1.
Dunfermline, 1.	Market Drayton, 1.	West Malling, 2.
Dunoon, 1.	Melton Mowbray, 1.	Weston-super-
Eastbourne, 1.	Mumbles, 1.	Mare, 11.
East Liss, 1.	Nelson, 1.	Weybridge, 2.
East Molesey, 1.	Newcastle-on-	Whitehaven, 6.
East Sheen, 1.	Tyne, 3.	Willenhall, 1.
Edinburgh, 2.	Northampton, 2.	Winchester, 6.
Ellesmere Port, 1.	Nottingham, 1.	Wisbeach, 1.
Ely, 1.	Nuneaton, 1.	Wolverhampton, 12.
Exeter, 9.	Oldham, 3.	Wordsley, 1.
Farnham, 1.	Ossett, 1.	Workington, 1.
Gillingham	Oxford, 3.	Worthing, 1.
(Kent), 1.	Peebles, 1.	Wrexham, 5.
Glasgow, 6.	Penarth, 1.	Yarmouth, 1.

Readers will note for themselves how strangely towns contrast as to subscribers—e.g., Birkenhead 62, Liverpool 3, Arbroath 7, Dundee 1, Edinburgh 2, Cardiff 30, Swansea 0, and so on. Local chemists' associations subscribed in the following places: Bath, Bournemouth, Bradford, Edinburgh, Glasgow, Hull (2), West Ham, Nottingham, Oldham, Sunderland, and Yarmouth.

Use of Common Salt.

SIR,—I do not see that your correspondent, Mr. Geo. P. Pond, gets us any nearer a solution of the question, "Is common salt a necessity?" He makes several bold assertions, but gives no proofs. He calls in Homer and Plato, the Apocalypse, and Alexander the Great in support of his views; but while these giants may have been authorities each in his own particular sphere, I do not think physiology was a strong point with any of them. The fact that Homer blessed common salt, or Plato deified it, or even that the sea is full of it is no proof that it is a necessity of human life. We are told that even Homer nods occasionally. Platonic philosophy errs in that it does not allow for the obstinacy and unliability of mankind, and although the sea is as full of fish as it is of salt, that does not imply that human beings must eat them in order to exist. We all admit, as he says in the last paragraph of his letter, that "as far as life is concerned nothing can supply the place of salt." The question at issue is: which is the better source of supply—the vegetable or the mineral kingdom? I, along with many others, maintain, and prove from personal experience, that the vegetable kingdom is the natural source, and that it is quite capable of supplying all the requirements of the human body. Mr. Pond asks: "Why has a beneficent Creator given such a superabundance of salt all over the world?" May I ask: "Why has the same Creator given us such an abundance of iron ore throughout the world?" Was it in order to provide the raw material from which to make Bland's pills? Our senseless methods of preparing and cooking foods nowadays remove most of the organic iron salt as well as the chloride of sodium from what we eat, and so it has become as great a necessity in many cases to supply the deficiency of iron with Bland's pills as it is for others to add common salt to their food to take the place of what has been washed out. Why is it that our chemists strive to produce organic combinations of iron (such as peptonates) in the laboratory and for anæmic humanity? Is it not because of the difficulty with which inorganic preparations are ingested and assimilated by the human machine, if they are assimilated at all, while the organic iron salts found in plants are absorbed quite readily? The same holds good with organic salt and common salt. Man is so constituted that he requires the intervention of plant life to make the mineral constituents of his frame assimilable. Mr. Pond goes on to say that a continued deficiency of common salt can only mean nervousness, emaciation, consumption, tumours, cancer, diseases of the liver and kidneys, etc. Very well, Mr. Editor, I have abstained from common salt for years now, and I can assure you that I am neither nervous nor emaciated, nor consumptive. [A portrait of the writer shows a healthy and robust man.—Ed., C. & D.] Tumours and cancer I am free from, so far as I am aware, while, if I have a liver or kidneys, I only know it because I have read so, and not because of their obtruding themselves on my notice. In conclusion, may I ask Mr. Pond to try an experiment? Let him ask his cook some day to boil or steam the potatoes without adding any common salt to them. Further, let him ask her to bring to the table the water in which they were boiled, or with which they were steamed. Let him taste it, and it may dawn upon him that the want of common-sense in cooking is the cause of the necessity for common salt in eating. SALINE. (83/56.)

Subscribers' Symposium.

(Information Solicited or Supplied.)

Meta's Hair-Tonic.

I charge as follows:

	s.	d.
Menthol (15 grains)	0	2
Bay rum (3 oz.)	0	10
Lavona de Composé	1	11
	2	11
Fon Fleur perfume, if required (sample bottle)	0	10
	3	9

C. S. Ashton (Brighton).

Picture Pipes.

H. B. (78/58) writes: Can any of your readers tell me what method is used to make a photograph appear on a clay pipe?

when it is smoked? When the pipe cools the picture fades away. These pipes were much in demand at one time, but have now gone out of use. I am told that the clay is prepared before being burnt by painting on a solution.

Worms in the Nose.

I noticed an inquiry by "Subscriber" (63/33) in your issue of February 12 regarding "thread or needle worms," in the reply to which you express a doubt regarding the statement that the worms issued from the nose and ears of one patient, aged thirty-five years. This phenomenon is not altogether uncommon among children, who infect themselves at the nose and ears by picking the same after scratching an obvious irritation elsewhere. This is the real explanation, and suggests its own remedy for "Subscriber's" patient.—*Arthur McEwan* (Cathcart).

Dispensing Notes.

Most dispensing problems are dealt with in "The Art of Dispensing," but we are always pleased to get fresh ones for solution, and to receive the opinions of readers on the points discussed.

Salol Mixtures.

Str.—I have a little difficulty in dispensing salol so as to make a presentable mixture. I generally rub it up with a stock mixture of sodii bicarb. and bismuth. carb. with pulv. tragac., but find that the salol is apt to float a little. In a concentrated mixture which I bought the salol was not visible, but a beautifully smooth creamy mixture was formed.

Yours very truly,
SALOL. (68/18.)

[As you have not sent your recipe, we take for illustration a prescription such as we infer you use. You should have no difficulty in preparing a nice smooth creamy mixture on the following lines:

Salol	...	...	...	3i.
Sodii bicarb.	...	...	...	5ij.
Bismuth. carb.	...	...	...	5ij.
Pulv. tragacanth.	...	...	gr. xij.	
Aq. ad	...	...	...	5vj.

Make a mucilage in the usual way with the tragacanth and half the water, and use it to rub smooth the salol, *finely powdered*, and the bismuth carbonate; add gradually, with continued trituration, the remainder of the water, and transfer to a bottle; then introduce the soda in smooth powder and shake. Alkalies are supposed to split up salol. By observing the foregoing procedure, the action of the alkali is minimised by the protective influence of the gum. When an acid-neutralising medicament is required in conjunction with salol it is customary to prescribe prepared chalk, which, being insoluble except in the presence of acid, does not produce an alkaline condition adverse to salol. The mixture with prepared chalk substituted for soda is not quite so white as with the soda. With precipitated chalk, however, the mixture is excellent. When chalk is used instead of soda, it can be rubbed down with the salol and bismuth. Any carminative or sweetening which your mixture contains should be added with the second portion of the water.]

Legal Queries.

Consult the legal information in "The Chemists' and Druggists' Diary," 1910 before writing about your difficulty.

F. G. (82/45).—"Medical Hall" is a place-name which is not restricted to those registered under the Medical Acts.

S. C. M. (83/68).—We consider that the terms offered refer to the net value of the goods after deduction of commission.

B. P. (16/91).—See *Chemists' and Druggists' Diary*, p. 213, second column, for particulars of changes made by the Act of 1908 in the conducting of the businesses of deceased chemists.

None Such (82/63).—There is no law to compel you to put in special fluted bottles any liquid that is not scheduled as a poison. You will find all particulars in regard to the use of poison-bottles in the *C. & D. Diary*, p. 210.

C. J. (80/53).—If you employ a canvasser to sell dutiable medicines, the delivery must take place at your licensed premises—i.e., your canvasser may not carry stock of dutiable medicines for sale from door to door, but he may take orders for you, the licensed vendor, to execute.

E. R. C. (79/6).—The preparation is the subject of letters patent, and its name is trade-marked. It follows, therefore, that you must be careful in what you think of doing.

East Anglian (81/14).—Every trading company has power to borrow and give security, and we see no reason why the proposed debentures should not be taken up by one of the directors. The debentures will, however, have to be registered at Somerset House, and all the formalities required by the Companies Acts observed.

B. T. F. (74/55) puts the following question: "Can two brothers, one qualified and the other unqualified, use the description 'Chemists'—i.e., 'Jones Brothers, Chemists,' or 'John Jones and James Jones, Chemists'?" [Not in England and Wales. The brother who is not registered as a chemist and druggist would be liable to prosecution under Section 15 of the 1863 Act.]

Agent (72/13).—As far as we can judge from your statement, you entered into an agreement with the agent to pay him 10 per cent. for finding you a tenant, you to refer any inquirer to the agent. In the circumstances which you describe, and as you cannot repudiate liability, why not tender him a cheque for the 10 per cent. for a year, with a note to the effect that it is payment of the commission covered by the agreement?

West Ham (76/10).—You should get a copy of the Schedule of Poisons card, which our Publisher sends post free for 6d. It shows that red and white precipitates and preparations or admixtures of them are Part 2 poisons. Liquid preparations of carbolic acid containing more than 3 per cent. are also scheduled, with an exemption as to certain preparations used in connection with agriculture and horticulture. Carbolic-acid ointment, not being a liquid, is excluded.

A. F. (85/6).—(1) Pills containing powdered savin are in Part 1 of the Poisons Schedule, subject to the provision "Do minimus non curat lex." If the provision does not apply, such pills can only be sold to persons known to the seller, and a statutory record of the sale must be made in the poisons book. Before you do this with the proprietary pills which you mention, you should communicate with the makers, as it does not follow that a published statement based on analysis of the pills is correct, and you may get into trouble with the manufacturers by treating the pills as a Part 1 poison, if there is no such poison in them. (2) A registered chemist and druggist who prescribes a mixture containing any scheduled poison is permitted by Section 17 of the Pharmacy Act, 1868, to regard the mixture as a medicine dispensed, and to label it in accordance with the sectional exemption. The term "medical prescription" does not occur in the section; the expression is "any medicine dispensed."

Miscellaneous Inquiries.

As we do not in this section repeat information given during the past twelve months, inquirers should refer to the copies mentioned. Back numbers for the past five years can generally be obtained from our office at the published prices.

Cannock (63/19).—(1) CULTIVATION OF CANARY-SEED.—Canary-grass (*Phalaris canariensis*), which produces canary-seed, is an annual which, in the early stages of its growth, resembles ordinary cereals. It is hardy, and adapts itself to soils of ordinary fertility, but poor, unprepared soil yields only a small return. The best results are obtained on strong rich loam bordering on clay, as the rootlets require to get a firm hold. The soil must be fairly well drained to avoid lodging water above or below the surface, as the grass will not stand excessive moisture. Plough the soil deeply in spring, and, where practicable, allow to lie fallow during the summer, or work with root crops, in order to eradicate all weeds and sweeten the soil. In autumn the land should be ploughed shallow, and the surface brought to a fine tilth. The seed is preferably sown in drills 9 to 10 in. apart, the amount of seed required being 30 lb. ($\frac{1}{2}$ bushel) per acre. If sown broadcast, twice this quantity is needed. Spring sowing is sometimes adopted, but the autumn is preferable. The grass is harvested before the seed is perfectly ripe, as the plant sheds its seeds freely. For this reason binding, stooking, and stacking must be carefully carried out, or much seed will be lost. The unripe heads continue to mature their seeds. The grass is threshed in the same manner as cereals, but the thresher is suitably adjusted so as not to injure the seed. The yield is from 25 to 35 bushels per acre. (2) Your other inquiry is being attended to in the proper department.

C. L. W. (46/72).—BASIC SODIUM SILICATE used in baths for rheumatism is water-glass— Na_2SiO_3 . As a rule, the bath-salts sold for this purpose are nothing but anhydrous sodium carbonate.

A. P. B. (43/26).—CLEANING PIANO-KEYS.—The simplest method for retail sale is to supply spirit of sal volatile and prepared chalk. Tell the customer to moisten a piece of

flannel with the sal volatile, and, dipping it in the chalk, rub on the keys. On a manufacturing scale, some success has attended the use of an alkaline solution of hydrogen peroxide, but this requires the removal of the ivory from the keys.

Council (50/6).—FLASH-POINTS.—The determination of the temperature at which organic compounds take fire—the flash-point—is usually confined to petroleum and lubricating oils, but we find that Raikow ("Chem. Zeit.," 1899) used the method in an investigation as to the relation between the flash-point, the molecular volume and volatility of organic compounds. In this paper the flash-point of benzene is given as "below $-8^{\circ}\text{C}.$," at which temperature it flashes nearly as readily as when it is liquid. The flash-point of absolute alcohol is $12^{\circ}\text{C}.$, while that of a mixture 99.5 per cent. of alcohol and 0.5 per cent. of ether is $9^{\circ}\text{C}.$ An admixture of water raises the flash-point, but not in regular proportion to the amount of water added. A mixture containing 4 per cent. of alcohol flashes at $68^{\circ}\text{C}.$, and is apparently the weakest alcoholic liquid that will exhibit the phenomenon of flashing. In the case of any special liquid, such as methylated spirit, no data exist, but the determination could be made by the method given in the Petroleum Act.

Brum (37/67).—WOOL-FAT PURIFICATION.—The sample of wool-fat you send could be purified by the Langbeck process, which was the subject of a patent, now expired. In this method the raw wool-fat is treated with solvents, such as alcohol containing ether, acetone, or benzene, to separate the free fatty acids, or these acids may be distilled off by means of superheated steam at a temperature of 400° to $450^{\circ}\text{F}.$ The fatty residue is then filtered through animal charcoal, either by maintaining the fatty matters in a fluid condition by means of heat or by dissolving it in benzene or acetone and filtering the solution through the charcoal. The solvent is recovered by distillation, and steam or warm air is blown through the fatty mixture until all traces of the solvent have disappeared. The result is anhydrous yellow wool-fat free from smell. The hydrous variety is made from this by adding 20 to 30 per cent. of either water or a solution of peroxide of hydrogen, the product being pure white. The various methods of obtaining and purifying wool-fat are given by Donath and Margosche in "Sammlung Chemische und Chemisch-technischer Vorträge," Band VI., Heft 2 to 4 (pp. 130), published by Enke, Stuttgart. Some years ago (1890) the processes for preparing wool-fat were epitomised by Mr. H. W. Langbeck in a paper read before the London Section of the Society of Chemical Industry, and reported in THE CHEMIST AND DRUGGIST at the time. From what has been said above, you will gather that it is entirely a matter of solvents, and Langbeck claimed that his product was free from toughness, which is caused by the presence of wax-like cholesterine ethers of high melting-point.

Sykes (38/68).—ANNATTO.—We have made a few experiments with the annatto extracts you have sent, but these have not advanced our knowledge very much beyond the point to which your information carried us. We noticed the red froth of No. 2 sample, and suggest that you should try the effect of adding a trace of carthamin to the annatto extract. Carthamin is the red colouring matter of safflower, and, although not much used as a dye-stuff, is obtainable from dealers in fine chemicals. It is readily soluble in alkaline solutions.

Spero (45/3).—We cannot undertake the analysis of the sample of cod-liver oil condiment. With the information you possess, a few experiments should soon put you on the right lines.

R. W. C. (30/64).—DOUCHE POWDER.—This consists of powdered alum, and is used in the proportion of a teaspoonful to a pint of water in affections of the womb. Zinc sulphate is sometimes given with alum, but does not appear to be present in this case.

Foot-rot (32/57).—The foot-rot powder consists of copper sulphate and Armenian bole. You give no particulars of the proportions that are used for the foot-bath. One pound of copper sulphate in a gallon of water is the strength recommended by the Board of Agriculture.

F. R. P. (24/72).—RINGWORM-CURE.—The "black naphtha" given as an ingredient in this cure is one of the by-products of gas-making. You would be able to obtain it from the local gasworks. Dilute it with twice its volume of sweet oil.

P. H. G. (47/53).—STARCH MANUFACTURE.—We think the harshness of your sample of rice-starch is due to the drying process having been hurried. With a temperature of between 30° to $50^{\circ}\text{C}.$ a fortnight or three weeks is required. The specimen appears to contain less water than is usual, but it would probably recover lost water if exposed to the air for some time. We presume that you have consulted Thorpe's

"Dictionary of Applied Chemistry," as we advised you last year.

Zonum (40/22).—Your inquiries hardly come within the scope of this column, as they are not of general interest. The hair-washes contain as the active ingredients (a) ammonia and aqua mellis; (b) tincture of cantharides and oil of rose geranium. The tooth-powder sent subsequently is flavoured with the oils of peppermint and wintergreen.

R. W. (57/66).—HAIR-DYE.—This appears to be a methylated-spirit solution of pyrogallol, and could be imitated as follows:

Pyrogallol	...	...	...	$\frac{1}{2}$ oz.
Solution of ammonia	...	...	...	2 dr.
Spirit	...	...	...	1 oz.
Water	...	...	...	3 oz.

Mix. The hair is first freed from grease, and when dry the dye is carefully applied by means of a small brush, the application being daily repeated until the right effect is obtained.

Mizpah (40/36).—HAIR-RESTORER.—This is the ordinary lead and sulphur wash. We can find nothing in it to justify the statement that it colours hair grown subsequently to the application of the restorer.

Zemo (64/11).—Castor oil can be filtered from dirt when hot through a filter-bag. Turbidity may be due to the presence of water, which should be allowed to separate by standing.

S. E. L. (69/51).—WATERPROOFING PROCESS.—It seems as if your customer will have to change his method of waterproofing the wagon-covers now that they are injuriously affected by the products of combustion from the steam lorries. You do not give details of the process used at present, but generally when linseed oil is employed its drying qualities are improved by being boiled with litharge and sulphur or other siccatives, while indiarubber dissolved in turpentine is not infrequently added. If the colouring matter is lamp-black, this might be replaced by asphaltum solution. The other processes which may have to be tried are impregnating the sail-cloth with stearine pitch or hard paraffin, ammoniated copper, or cutch.

J. B. D. (43/54).—CALCIUM CARBIDE.—Both the samples of calcium carbide which you sent us are in powder form, so that we are unable to state what protective agent has been used on one of the specimens. Many methods have been proposed for preserving carbide from the air, the following being some of the suggestions: Glucose, fused sodium sulphate, melted sugar, resin, naphthalene, paraffin wax, petroleum, lubricating-oil, diluted tar. The carbide in small lumps is immersed in one of these substances—in the case of solids they are first melted—and well drained.

B. P. (16/91).—Warm the castor oil carefully so that the water which has got into it may sink in the more limpid warm oil. Decant from the water when cool.

A. C. S. (84/52).—Japan is not a free-trade country, the tariff weighing heavily on practically all classes of goods. This has been brought about by war expenditure, and in the majority of instances the duties are much higher than they were previous to the war. Special war-taxes were imposed from July 1, 1905, under which drugs, chemicals, and medicines (with few exceptions) pay 20 per cent.

Our Retrospect.

(From the "C. & D.," February 15, 1860.)

Fragmenta Veterinaria.

It was not until 1791 that a veterinary school, St. Pancras, London, was established in Great Britain, and that, too, at the instigation of a Frenchman, Vial de St. Bel, who was appointed its first professor. This gentleman only lived a short time, and at his death the vacant chair was filled by Professor Coleman, who ruled the St. Pancras school for nearly half a century. Professor Coleman was succeeded by Professor Sewell, and the latter gentleman by Professor Spooner, now Principal Professor. Some time after the foundation of the London school another was established in Clyde Street, Edinburgh, by Professor Dick; and in 1844 the Royal College of Veterinary Surgeons was incorporated by a charter, which required for membership the possession of a diploma conferred by this body after examination. To this college the two existing schools—viz., the one at St. Pancras, London, and Clyde Street, Edinburgh—were affiliated, which entitled their students, on presenting a certificate to the effect that the prescribed course of study had been completed, to become candidates for examination.

Window Shows.

There are few methods of advertisement which can prove so strongly magnetic to the casual purchaser as a really effective window display. Now and again one is met with that will draw a busy man across a crowded thoroughfare, hold him rapt before it for a moment, and finally pull him into the shop. But it is not



every shop front and not every article that lends itself to this special treatment. It is difficult to imagine a really attractive show of, say, watering cans in an oil and colour merchant's establishment, although we do not say that it could not be done. Chemists' windows, however, are eminently suitable for the purpose, and



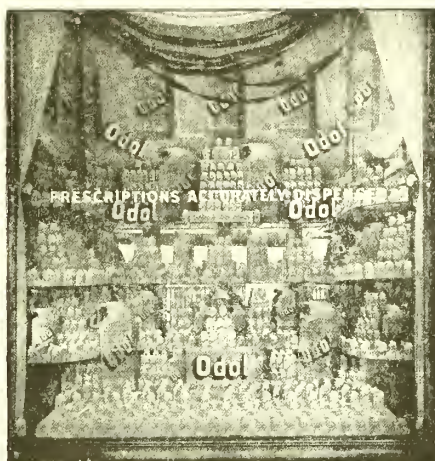
the exercise of a little imagination and artistic feeling, combined with proper choice of the article to be displayed, will always have the effect of brightening a chemist's shop and contrasting it favourably with its neighbours, be they never so gaily adorned. When



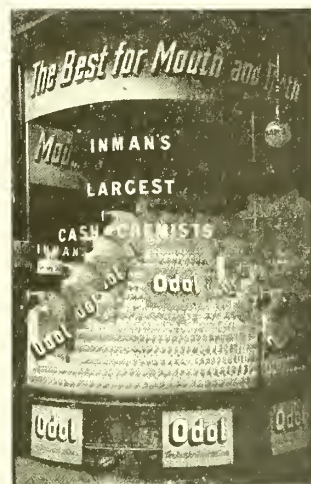
thoroughly well done these displays provide an attraction well-nigh irresistible to our friend "the man in the street." We illustrate a few examples of what can be done in this way with a well-known dentifrice, whose dainty blue and white flasks, of peculiar and unmistakable shape, are admirably adapted, as will be seen, to striking arrangements which compel attention, with the



natural corollary of improved trade in other directions, apart from the goods thus advertised. The Odol Co. have long recognised the force and value to their retailers of this form of advertising, for Odol is never a dead stock, never hangs on hand, but is always



in demand, the result of its intrinsic merit and the constant and wide publicity given to it in the press. And every bottle sold shows a good profit to the Chemist. The Odol Co. are always prepared to supply dummy bottles, cardboard designs and an infinity of other material with whose aid the veriest tyro at the art of shop-dressing can make his window a positive landmark. All their material and designs are in excellent taste, the keynote of their advertising being delicacy with strength, while there can be no doubt as to the extraordinary favour their products enjoy, since all who value sound, white teeth want Odol. A post-card to the Odol Chemical Works, Park Street, S.E., stating roughly what is required, will always receive prompt and careful attention, and will undoubtedly lead to mutual benefit.



"DIAMALT" = The Purest and Highest
IS Diastasic Malt Extract
= on the Market.

"DIAMALT" with COD LIVER OIL is MATCHLESS.

The "**British Medical Journal**," November 20, 1909, reported upon eleven leading proprietary malt extracts, the **DIASTASIC POWERS** being as follows:—

1. 380	4. 366	7. 1060	9. 38
2. 23	5. 86		10. 866
3. 39	6. 940	8. 382	11. 0

No. 7 is DiaMalt, and the complete analysis showed:

Total Solids 74 per cent.

**Reducing Sugars (calculated as maltose)
63.9 per cent.**

Protein 6.52 per cent.

Dextrin 12.7 per cent.

Ash 1.2 per cent.

Diastasic Power 1060.

See for yourself, by reference to the "**B.M.J.**" of November 20, what the other ten are.

DiaMalt Preparations give the Chemist **30 per cent. CLEAR PROFIT**, secured by the P.A.T.A.; besides, he sells the preparations under a guarantee, thereby enhancing his reputation; and DiaMalt is the Extract which the Medical Profession now know is at the top.

Obtainable from all Wholesale Houses or direct from

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Chloroform (Duncan). Manufactured from **PURE BRITISH ALCOHOL**.

Ether Rect. 0.720 (Duncan).
Manufactured from **PURE BRITISH ALCOHOL**.

Chloryl Anæsthetic (Duncan).
Syn. for Duncan's **ABSOLUTE ETHYL CHLORIDE**.

**ALL THE ABOVE ARE British Products GUARANTEED TO BE
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AND ARE MANUFACTURED BY**

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Unguentum Resinol is a skilfully made and chemically pure Ointment. Its therapeutic properties are decidedly healing, nutrient and antiseptic. The consistence and pliability of this ointment commend it especially as an application of exceptional merit in all eruptions and irritations of the skin. It is prescribed daily by leading physicians throughout the world for

ECZEMA, HERPES, SEBORRHOEA, ERYTHEMA, IMPETIGO, TINEA, ERUPTION OF POISON IVY, PILES, BURNS, SORES AND MINOR WOUNDS, AND ABRASIONS OF THE SKIN.

It allays the itching of **PRURITUS ANI** instantaneously.

Its utility as a specific for this trouble is recognised by practitioners of every school and every nationality.

Resinol Soap, containing in a modified way the same medication, is most delightful for the toilet and bath, and is the only soap that should be used for bathing persons subject to, or affected by, skin troubles.

Resinol (medicated) Shaving Stick also contains the healing and antiseptic virtues that have made Resinol Ointment so famous. Its free, creamy lather soothes and prevents the irritation incident to shaving. It is a real luxury and comfort to self-shavers.

These preparations are for sale in all leading drug stores in every country of the world.

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RESINOL CHEMICAL CO.
BALTIMORE, MD.

AUSTRALASIAN AGENTS:
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40 Aldersgate Street, LONDON, E.C.

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Many pharmacists have assured us that even when the name "**HEWLETT'S**" is not appended to the above title they invariably dispense **HEWLETT'S** preparation, as they know from experience that it is the best, that it keeps indefinitely, and universally gives satisfaction, whilst imitation preparations vary so considerably, not only from the **original** but from each other, that patients notice the difference, and complain.

Price 11s. per lb., packed, for dispensing only, in 10, 22, 40, and 90 oz. Bottles.

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A Pharmaceutical Chemist in Belfast writing last month regarding an order for our up-to-date Packed Specialities, says :—

*"These lines help to make life worth living these
oppressed times, and they please the customer."*

Our NEW ORANGE QUININE WINE, P.B.

Commands sales, *the flavour is quite unique.*

It is brilliant and will not deposit.

The very Finest Wine on the Market. Please compare with any make you stock.

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—CONTAINS NO POISONOUS INGREDIENT.—

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"Bronchial Balsamic Waters"

Owing to a recent decision of the Board of Customs and Excise, which reverses a decision made in 1903, the word "Balsamic" in our label as above is declared to render the article liable to Medicine Stamp Duty. In future we shall adopt the title of

"Bronchial Waters,"

which is free from liability.

 No action will be taken in respect of the above until the end of April. Will our Customers kindly return any small Boxes or Tins which may be left on hand at this time for exchange, or in the case of 1 lb. Bottles or bulk, ask us for fresh Labels?

RAIMES & CO., YORK.

Health, Strength and Energy.

PLEASE REMEMBER THAT

DR. LALOR'S PHOSPHODYNE

Is the Original and Genuine Phosphoric Tonic
with Forty years' world-wide reputation.

OF ALL CHEMISTS AT 4/6 AND 11/-

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(HENRY BOYCE, Manager), AGENTS FOR

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Tinctures, Ethers, Liniments, and Spirituous Extracts, &c., prepared with purest Spirit, and from best quality of raw Drugs, in accordance with requirements of British and other Pharmacopœias, Iodoform (absolute), Iodine Resublimed, Potassium Iodide, Sodium Iodide, all Preparations of Bromine, Santonin (from Turkestan factory), Cocoa Butter, Castor Oil, Chloroform, Cod Liver Oil, Resina Jalapæ, Resina Scammonia.

DE DIETRICH & CO.'S ACID-PROOF ENAMELLED CAST IRON APPARATUS,

Standing the strongest corrosives and highest pressures, for the Chemical and kindred industries.

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CARL KELLNER, ARLESBERG (in Thür.): Thermometers and Chemical Glassware.

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Mild laxative and purgative. Non-irritant to the Kidneys. Non-gripping, non-depressant. Efficacious in habitual constipation.

Dose: 3 to 6 grains. Tablets (12 in tube) and Bonbons (16 in box).

BORNYVAL

(Borneol Valerianate)

The Standardised Sedative Principle of Valerian. In hysteria and general neurasthenia, climacteric troubles, neuroses.

Dose: 4 to 12 minims. Gelatine Capsules (BORNYVAL PEARLS) 25 in box.

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(Kava-Sandalwood Oil)

Best and safest balsam in acute and chronic gonorrhoea. Astringent, anæsthetic, anaphrodisiac, sedative, bactericidal. The stomach & kidneys remain absolutely unaffected. Dose: 5 to 10 minims. Gelatine Capsules (32 or 50 Capsules).

MERGAL

(Mercury Cholate)

The safest and best tolerated mercurial for internal administration in syphilis. Contains 23.3 per cent. Mercury. Dose: $\frac{1}{4}$ to $1\frac{1}{2}$ grains. Gelatine Capsules (50 in box).

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(Albumen Cholate)

Specific for acute and chronic affections of liver and biliary passages, gallstones, dyspepsia, fatty stools, atonic constipation.

Dose: $7\frac{1}{2}$ to 22 grains. In Gelatine Capsules (50 Capsules).

SCOPOMORPHINE

(Physiologically pure Scopamine-Morphine)

Vide Leedham-Green, at Belfast, 1909. (B.M.J., Oct. 2nd.)

For General and slight Anæsthesia in conjunction with Spinal Anæsthesia. Injections in labours and inoperable cancer and tabes. In sterilised Ampullæ (1 and 2 c.c.).

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(The original Antipyrine Salicylate)

Antirheumatic and Antineuralgic. Over 18 years' reputation.

SALIPYRETS {Salipyrin-Riedel in Tablet Form.
Specific for Influenza and Colds.

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(Sulphurated Hydrocarbons)

Contains 12% sulphur, soluble in water. Non-irritant cutaneous disinfectant for burns, eczema and skin diseases. Administered in gout, rheumatism. Does not stain linen.

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NOTICE.

MILK EMULSION.

THE name "Milk Emulsion" is our Trade Mark for an Emulsion of Cod Liver Oil with Hypophosphites, and designates specifically that it is our preparation. Our Emulsion is known in commerce as "Milk Emulsion," and when "Milk Emulsion" is ordered, people expect to receive FAULDING'S MILK EMULSION. We hereby give notice that no other persons can use the same name on their labels, wrappers or advertisements without infringing our legal rights.

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You save 22% to 37%

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COCAINE

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and their Salts.

Narcotine

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Bromides, Iodides, Bismuth Subnitrate, Gallic Acid, Phenacetin, Salol,

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phosphates,
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A Druggist is known
by the drugs he keeps,

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SPECIFY

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which are the Standard and cost no more.

Santonin,
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Accitanilid,
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SPERMINUM (POEHL)

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SPERMINUM is a purified organic product. For subcutaneous injections it is put up in Ampullae, each containing one dose. Its employment is indicated in cases of NERVOUS DEBILITY, NEURASTHENIA, LOCOMOTOR ATAXY, AND ALL OTHER ALLIED NERVOUS AFFECTIONS.

In milder cases where the resort to subcutaneous injections is objected to, the ESSENTIA SPERMINI may be given with advantage.

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THE HULL OIL MANUFACTURING CO. HULL, ENGLAND. LIMITED.

PURITY GUARANTEED.

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PIONEERS
OF THE

CASTOR OIL

INDUSTRY
IN ENGLAND

MEDICINAL, FIRSTS and SECONDS.

Our MEDICINAL OIL is specially recommended. Being a Pure Sweet Natural Oil, it is practically Tasteless.

NO ARTIFICIAL BLEACHING; THEREFORE NO RANCIDITY.

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" CITRIC	CREAM OF TARTAR	CHALK
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Goods bought and sold on Commission.

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Sites suitable for the establishment of Factories and Works are available adjoining the Great Western Railway, within easy access of the principal ports, Coal and Iron fields, and Industrial centres. Particulars of such sites, and of the Company's arrangements for Siding Facilities, Conveyance Rates, &c., &c., may be obtained from the Chief Goods Manager, Mr. T. H. RENDELL, Paddington Station, W.

JAMES C. INGLIS, General Manager

THOMAS TYRER & CO. Ltd.

(THOMAS TYRER, F.I.C., F.C.S., Managing Director).

1844 — STRATFORD, LONDON — 1910

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"Sterling"
BRAND.

PHARMACEUTICAL Chemicals INDUSTRIAL

INFERIOR TO NONE

Ethers—Hypophosphites.

ACETONE	CARBON
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SCALE PREPARATIONS.

BISMUTHS & MERCURIALS.

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PATTINSON'S MAGNESIA

CARBONATE, CALCINED, AND FLUID.

THE WASHINGTON CHEMICAL CO., LIM., WASHINGTON, COUNTY DURHAM, ENGLAND.

London Agents: MESSRS. CLIFFORD CHRISTOPHERSON & CO., 21 Mincing Lane, London, E.C.

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Hand or Machine Made.

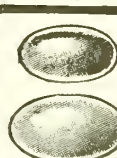
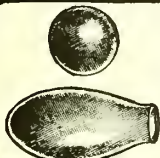
To suit all Climates.

Absolute Purity of Contents.

Best Finish.

Capsules
JOHN TYE & SON,
Manufacturing Chemists,

TYE'S & Perles
Packington Street,
LONDON, N.



"JOHN BULL" MALT EXTRACT

"PACO" DIASTASE BRAND.

A Malt Extract that Chemists can sell with credit and with profit.

	1 lb.	2 lb. (32 ozs.)		1 lb.	2 lb. (32 ozs.)
Selling Price ...	1/6	2/6	Price to Chemists ...	1/-	1/9
Protected Price ...	1/4	2/4	Minimum Chemists' Profit	4d.	7d.
				33½%	33½%

"The Chemist and Druggist's" Testimony.

"PACO" DIASTASE MALT EXTRACT.—Messrs. Paine & Co., Ltd., Maltsters and Malt Extract Manufacturers, St. Neots, whose "John Bull" Malt products are well-known to Pharmacists, have recently introduced a malt extract of high diastase value, which they guarantee to have a power of 100° Lintner. We have examined a sample of this extract and found it to be excellent in flavour and appearance. Its diastase activity on the Lintner scale is 146°—a strength which is exceptionally high, since it is equal to an extract of 1800° tested by the more empirical B.P. Codex method. This result has been corroborated by Mr. E. R. Ling, F.I.C., F.O.S., a well-known authority on malt, who informs us that he has not met with an extract of higher diastase power. Messrs. Paine & Co. inform us that they are putting the extract on the market in 1-lb. and 2-lb. jars, and they will be glad to furnish buyers with further particulars on application.

"The Pharmaceutical Journal" says:—

MALT EXTRACT.—An examination of a sample of "John Bull" Malt Extract ("Paco" Diastase Brand), received from Messrs. Paine & Co., Limited, St. Neots, shows that it is exceptionally high in diastase and in total nitrogenous constituents. It is of agreeable flavour and excellent appearance. The figures obtained by us on analysis are:—

Total Solids		79.6 per cent.	Diastase Power in Units of "Codex," Test 1,724, in Degrees Lintner 132.	
Reducing Sugar, calculated as maltose		70.0 per cent.	Ash	1.6 per cent.
Protein, calculated from nitrogen found		7.9 per cent.	Messrs. Paine & Co., Limited, also sent us a sample of malt extract, specially prepared, to show what they could do in the manufacture of still higher diastase strength, and the figures obtained on examining this sample are:—	
Total Solids		79.4 per cent.	Diastase Power in Units of "Codex," Test 2525, in Degrees Lintner 210.	
Reducing Sugar, calculated as maltose		65.4 per cent.	Ash	1.8 per cent.
Protein, calculated from nitrogen found		8.5 per cent.	They inform us that their "Paco" Diastase brand is being placed on the market in 1 lb. and 2 lb. jars at protected prices, which show a profit to the retailer of 33 1/2 per cent.	

PAINE & CO.

MALTSTERS AND
MALT EXTRACT
MANUFACTURERS

ST. NEOTS, Huntingdonshire.

Largely increased Production and Sale.

Special Terms to large Shippers.

PRECIPITATED CHALK

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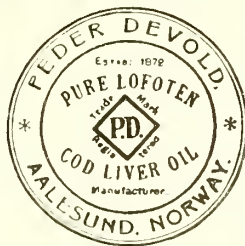
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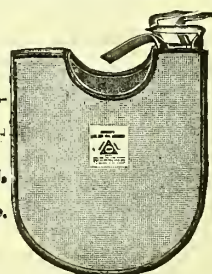
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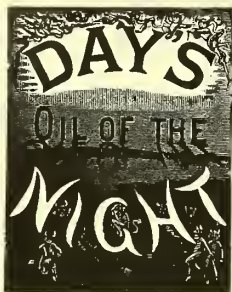
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*Lin. Aconiti Meth., 5 lbs. @ 1/2 lb.; 1 lb. @ 1/5 lb.

*Lin. Bellad. Meth., 5 lbs. @ 1/5 lb.; 1 lb. @ 1/8 lb.

Lin. Camph. P.B., 40 lbs. @ 10½ d. lb.; 9 lbs. @ 11½ d. lb.

Lin. Sapo Meth., 9 lbs. @ 7d. lb.

Lin. Tereb. Acet. B.P., 9 lbs. @ 1/- lb.

Linseed c. Oil, Orushed, 5 cwt. @ 17/- cwt.; 1 cwt. @ 17/6 cwt.

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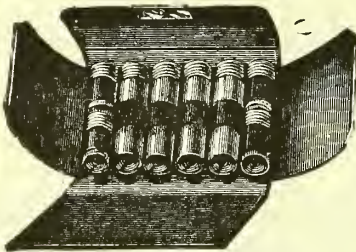
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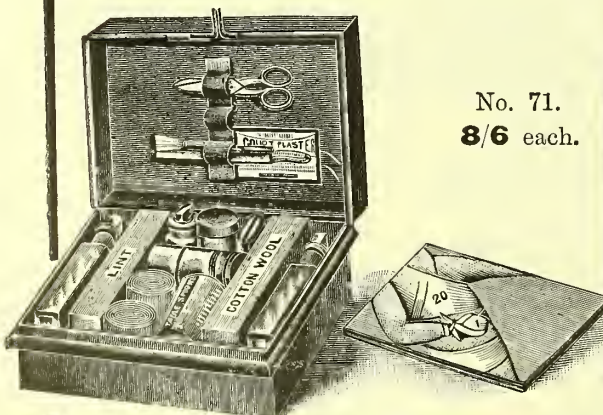


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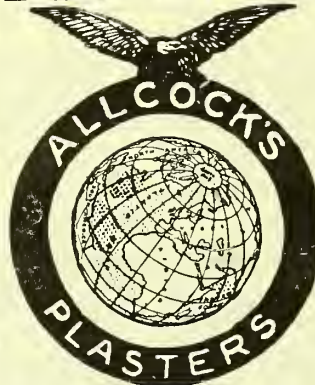
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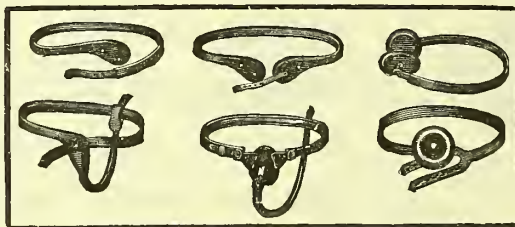
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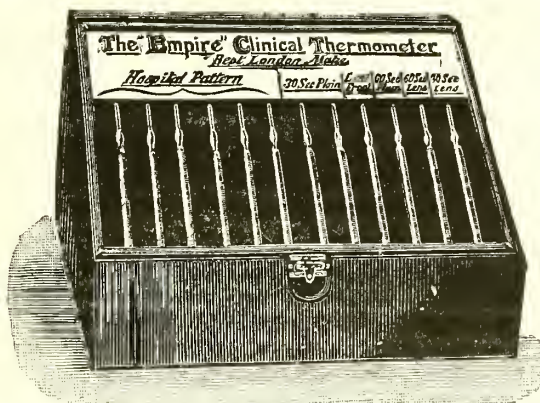
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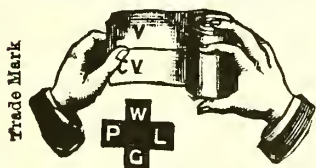
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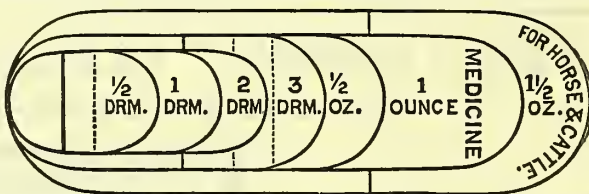


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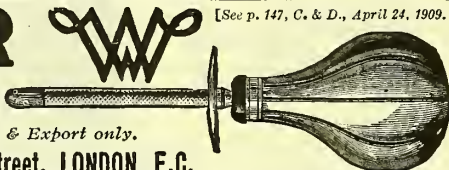
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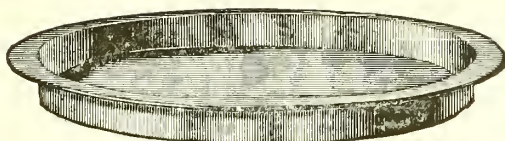
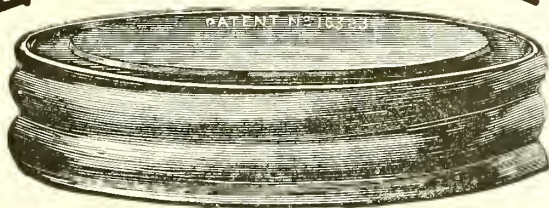
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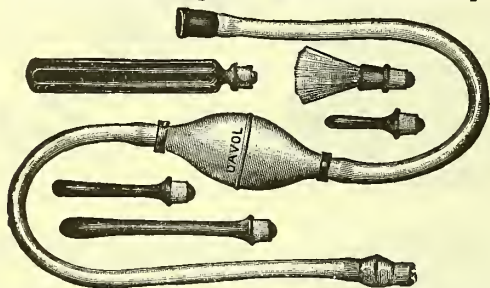
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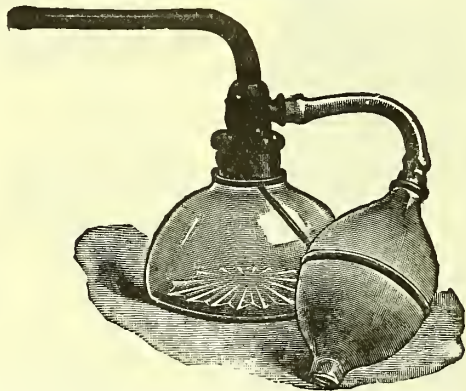


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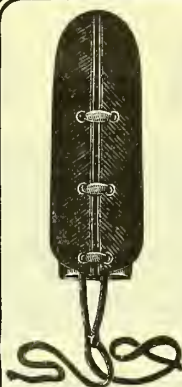
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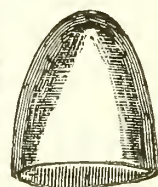
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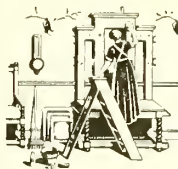
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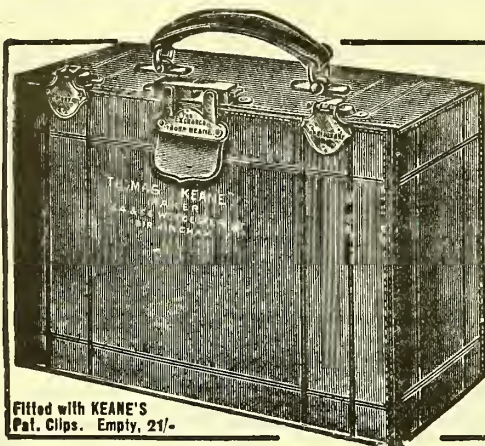
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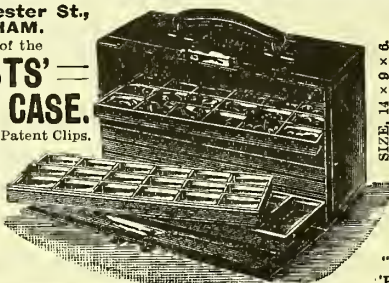
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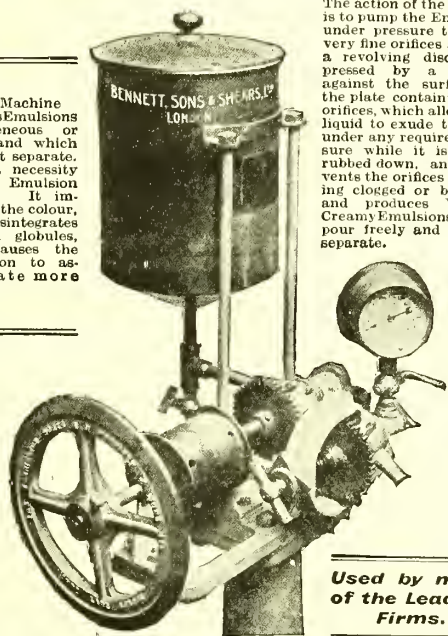
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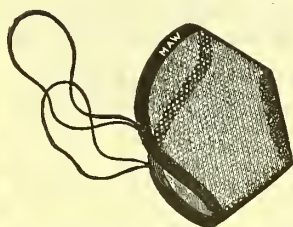
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Dr. COGHILL.

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in *BRITISH MEDICAL JOURNAL*, December 11th, 1909.



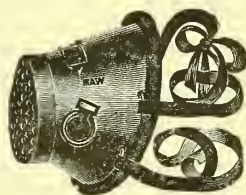
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Formula recommended by Dr. BURNEY YEO, Physician to King's College Hospital.

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THE CHEMIST & DRUGGIST SUPPLEMENT.

OFFICE. 42 CANNON STREET, E.C.

SATURDAY FEBRUARY 26, 1910.

TO ADVERTISERS IN THIS SUPPLEMENT.

The Publisher desires to make it clear that advertisements of Businesses for Disposal and Wanted, Situations Open and Wanted, Exchange Column, &c., **MUST BE PREPAID** (except in the case of serial advertisers) and to ensure prompt insertion **REMITTANCES MUST ACCOMPANY INSTRUCTIONS.**

Advertisements for the current issue cannot be received after 4 p.m. on Thursday in each week. If it is necessary to telephone or telegraph an urgent announcement this may be done.

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at the same time and the fact made clear that the money order is to be delivered at 42 CANNON STREET, LONDON, E.C. Advertisers will assist greatly in the preparation and quick despatch of the Supplement by making careful note of these rules.
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Telegraphic Address: "Chemicus London."

A Copy of this Supplement is inserted in every Number issued of "The Chemist and Druggist."

NO TIME LOST!

As everybody knows *The Chemist & Druggist Supplement* is published on Friday mornings. By Friday afternoon, February 18, we had in our offices

46

replies to advertisements appearing in the current Supplement and bearing a *nom de plume* or a number. By Saturday morning's post our clerks were dealing with an additional

250

from all parts of the Country.

This makes a satisfactory total of

296 OFFICE Replies in about 12 Hours.

This leaves out of consideration entirely *direct replies* to advertisers who gave their names and addresses. But no further proof is needed that IT PAYS TO PAY for advertising in this Supplement.

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3.—LONDON, N.—Illness cause of sale; ready-money Business; Retail, Prescribing, and Optical; returns £955; *profit (net)* £276; proof given; rent £50; new lease; price £400, for which full value is offered.

4.—HIGHBURY.—Old-established Business; Retail, Dispensing, and Prescribing; returns £627; *net profit* £270; rent £50; held on lease; price £475.

5.—LONDON, S.W.—Good-class Retail and Dispensing Business; situate in close proximity to busy railway station; returns about £1,250, at full prices; price £1,000.

6.—LONDON (Northern Suburb).—Middle-class Retail and Dispensing Business; returns £550; *gross profit* £300 (about); stock and fixtures estimated by vendor at £425; roomy house; small garden; price £380.

7.—CORNWALL.—Vendor retiring; Retail and Dispensing; all good-class trading; returns about £1,400 per annum; terms, goodwill, £50; stock and fixtures at a fair valuation.

8.—SOMERSET.—High-class Pharmacy; excellent situation; returns average between £1,050 and £1,100 per annum; scope for development; commodious house; held on lease; price £450.

9.—LIVERPOOL.—Old-established Business; main thoroughfare; returns average £1,092; *profit (net)* £280; handsomely-fitted pharmacy; single fronted; price £1,000.

10.—SOUTH DEVON.—Neglected Business; excellent position; returns £488, which produce a *net income* of £180; good house; held on lease; price £250.

11.—BUCKS.—Very old-established Business, including Wine and Spirits; returns between £1,700 and £1,800 per annum; *net profit* about £400; price £850.

12.—HOME COUNTY.—Good middle Business; main thoroughfare; returns average £940; *profits above the average*; rent £60; large garden; price £700.

13.—GLOUCESTER (Market Town).—Ready-money Business; Retail and Prescribing; returns £740; *gross profit* 40 per cent.; price £550.

14.—WORCESTER (Market Town).—Retail, Prescribing, Dispensing, and Optical; returns average £1,089; *gross profit* £450; vendor retiring; price £700.

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3.—LIVERPOOL.—Good-class Light Retail and Dispensing; returns £1,100; net profit £365; good house and shop; price £1,000.

4.—LONDON, S.W. — Good-class Light Retail; large, double-fronted shop; good house; returns £800; net profit £250; price £450; neglected; could do three times as much.

5.—MIDLANDS.—Light Retail, Dispensing, and Prescribing; fine bold corner position in healthy suburb of large town; old established; good house; returns about £700; plenty of scope for increase; price, simply valuation of stock and fixtures, about £400.

6.—YORKS.—In very popular seaside resort; Light Retail, Dispensing, and Photo; few Patents; returns approach £700; net profit £200; good double-fronted shop and large house; price, valuation, about £520.

7.—MIDDLESEX.—Light Retail, Dispensing, and Prescribing; returns £680; net profit £200; handsome shop; trial allowed to a genuine purchaser; price £400, or offer; part can remain.

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Pharmacists who are thinking of having their Stock taken are requested to write us; we have an extensive and, what is more, PRACTICAL experience as Chemists and Druggists, both Wholesale and Retail. We annually Stocktake for Pharmacists all over the U.K., and our most moderate terms and high-class work place us "on top" as experts for this very important branch of our ever-increasing business.

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3.—MIDDLESEX.—Good-class Light Retail Business; returns £900; net profit £250; no opposition; modern Pharmacy; stock and fixtures worth £600; price £725; personally inspected.

4.—HAMPSHIRE.—Light Family Retail Business in good-class growing district; returns nearly £700; no side-lines; plenty of scope; net profit £220; good house and shop; price £440.

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7.—LONDON, S.W. (main-road position).—Modern Cash Retail, entirely under management; returns exceed £2,000, stands to do £3,000; fine corner Pharmacy; price £900, or simply valuation.

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9.—SUFFOLK.—Unopposed Light Country Retail, with valuable appointment; returns nearly £600; net profit £250; low rent; good house and shop; well stocked; same hands many years; price £500.

10.—SOUTH COAST.—Light Retail, Dispensing, and Prescribing Business in good position; returns £800; net profit £200 to £250; good house and shop; low rent; long lease; price £520, or £200 down and £365 by instalments.

11.—BUCKS.—Good-class Retail and Dispensing Business; in central position; returns about £700; large house and garden; attractive shop, heavily stocked; price £550.

12.—STAFFS.—Sound Mixed Retail Business in splendid position of important market town; returns £500; can easily be doubled; net profit £200; price £350 or simply valuation.

13.—MONMOUTHSHIRE.—Good-class Country Retail, in busy market town; returns £650 to £700 under manager; scope for increase; low rent; well fitted and stocked; price £425, or near offer.

14.—DEVON.—£125 cash down will secure a sound Light Retail Business in large town; returning £500 and net profit £190; fine corner shop, well stocked; price £250, half can remain.

15.—NORWOOD.—Good-class Retail and Dispensing Business; returns £600; net profit £190; growing district; low rent; well fitted and stocked; price £350; strongly recommended.

16.—LONDON, N.W.—Sound Light Cash Retail Business; returns over £650; well-fitted shop, fully stocked; good house, etc.; price only £350; personally inspected.

STOCKTAKING VALUATIONS.

We undertake stocktakings in any part of the kingdom. The work is done in full detail and by experts. The cost is exceedingly small. We invite those thinking about it to write for our circular on the subject, and our reduced terms for doing the work.

T O M T O M

Telegraphic Address.

THOS. TOMLINSON & SON.

Chemists' Valuers and Expert Stocktakers,

Businesses transferred privately.

29 NEW CANNON STREET, MANCHESTER.

We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents, or assistants, or wish to sell their businesses, an advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and admittances can be sent to us direct or through the advertisers' correspondents in this country.

BUSINESSES FOR DISPOSAL.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond, prepaid.

NOTE.—Replies can be addressed to this Office and forwarded to the Advertiser for an Additional charge of 6d.

COLONIAL BUSINESSES.

We call the special attention of our Colonial subscribers to the opportunity this Supplement affords when they wish to dispose of their Businesses, of getting into touch with likely buyers either at home or in the Colonies.

Replies to Advertisements may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

BIRMINGHAM (High-class Suburb).—Old-established Retail and Dispensing Business, with Wine and Spirit Licence; handsome shop, well fitted and stocked; excellent house; must be sold for family reasons; price considerably less than value of stock and fixtures; exceptional opportunity for energetic man. Apply, "Statin" 210/33, Office of this Paper.

BRISTOL.—For quick Sale, discount off valuation or low offer, old-established Dispensing, Prescribing, and Light Retail; rent £50; lease; well fitted and stocked; good house; bath; side entrance; small garden; net profit £232; splendid chance; populous district; exceptional rate of profit; special reason for selling. "Casarea" (211/27), Office of this Paper.

EASTERN COUNTY.—Good-class Light Country Retail Business in pleasant market town; selling through continual illness; returns average £900, capable of much increase; good profits; excellent house and garden; shop is well fitted and heavily stocked; price £850, or £100 goodwill, stock and fixtures at valuation. "Bona-fide" (213/34), Office of this Paper.

ESSEX.—In one of the most rapidly rising suburbs; grand position for increase; opened 4 years; returns last year over £700 and still increasing; good profitable cash trade; fine opening for Dentistry; long lease; moderate rent; modern fittings and well stocked; excellent house; an exceptional opportunity for up-to-date man; must be sold; price £450. 211/29, Office of this Paper.

HULL.—Newly established, good-class Business for Sale; good residential position; shop well fitted and stocked. For full particulars apply, 207/39, Office of this Paper.

KENT.—Small Business, within easy distance of London, doing over £300 under unqualified; good profits; scope for increase; big population; no opposition near; splendid opening for Dentistry, Optics, and Photography; price, £70 or valuation. Apply, "Hop" (214/18), Office of this Paper.

LEEDS.—Compact little Business for Disposal, doing Light Profitable trade; comfortable house; rent £20; price £140, or valuation; part purchase money can remain on. Apply, Hirst, Brooke & Hirst, Ltd., Leeds.

LONDON, N.—Owing to death of proprietor, an old-established Business in main market thoroughfare for Sale; 17 years' lease; well stocked, can be extended enormously; to immediate buyer price £300. Apply, 210/12, Office of this Paper.

LONDON, W.—Business for Disposal in busy main thoroughfare; returns last year £550, under very indifferent management; could be easily doubled by smart man; nicely fitted shop and well stocked; reasons for disposal, owner cannot devote his undivided attention to it; this is a chance which should not be missed; cash price £250. 210/7, Office of this Paper.

LONDON, N.—Good-class neighbourhood; Dispensing, Prescribing, and General Retail; medical connection; public telephone; rent £50; net profit £90; could be easily doubled on modern lines; price £120, or offer; proprietor wishes to sell urgently. Apply, "Alum," c/o Evans Sons Lescher & Webb, Ltd., London, E.C.

LONDON, W.—Branch Business for Disposal; main road; splendid position; large population; been open 18 months; year's takings between £900 and £1,000; good profits; no near opposition, and good prices obtained; large house; lease 21 years; lowest cash price £650; references exchanged. Apply, 212/3, Office of this Paper.

LONDON, N.—Must sell, immediately, at great sacrifice; large, well-stocked shop; old-established; present owner unqualified; takings £450; house, garden, separate entrance; great scope for Prescribing; situated thickly populated locality; will accept £200. 214/11, Office of this Paper.

MANCHESTER.—Old-established Business (over 60 years), with Dental practice, known all over Lancashire, for immediate Sale; inquiries invited. "Borax" (210/23), Office of this Paper.

MONMOUTHSHIRE.—Business; capable of great improvement; good central position in the town; late proprietor's age 85; rent £23; returns £300 to £350; no salaries; net profit 50 per cent.; price £125; a bargain. Apply, "S. W.," c/o Evans Sons Lescher & Webb, Ltd., London, E.C.

NORTH OF ENGLAND.—Good-class Retail and Dispensing Business in market town; last year's returns over £600; handsomely fitted and well stocked; owner going abroad. Address 212/19, Office of this Paper.

PEMBROKESHIRE.—Business for Sale; Chemist and Optician; returns £800 per year under assistant; lock-up shop; rent £25, inclusive rates; price £350, or valuation. Address, "Pembroke-shire" (211/16), Office of this Paper.

SOUTH DEVON.—To small capitalists.—An opportunity offers to secure an old-established Business, including a well-known Proprietary which has an excellent local sale; good opening for Dentistry; part payment entertained. Apply, "Urgent" (87/39), Office of this Paper.

SOUTH WALES.—Unopposed Business in pleasant mining district; population about 8,000; low rent or easy lease; returns over £600 under unqualified management, and capable of increase; satisfactory reasons for disposal; stock about £180; part can remain on security. Apply, "Genuine" (208/29), Office of this Paper.

S.W. An easily worked Light Retail and Prescribing unopposed Business; nicely fitted; average returns £5; scope for more; present hands short time, previously 10 years; moderate rent; 7-roomed house, every convenience, garden; pleasant locality; good reasons for sale; price £100, or valuation accepted. "Cinchona" (208/28), Office of this Paper.

WARWICKSHIRE.—Death Vacancy.—Light Retail, Dispensing, Prescribing, Photographic Business; pretty and growing district; returns year ending March 1909 £746; net profit same year £320; modern shop, well fitted and stocked; six-roomed house; rent £30; rates £7; good lease; price £460 cash; books and invoices open to inspection. Beckett, Kenilworth.

CHEMIST and Druggist's Business for Sale; populous district; incoming tenant required and about £100. Apply, C. Cotterell, Chartered Accountant, 57 Colmore Row, Birmingham.

CHEMIST'S, Surrey village; well-fitted and stocked shop; convenient 7-roomed house; rent £40; under lady's management; taking £8 weekly; much neglected; capital chance for energetic man; everything £250. Charles Varley, 106 Stoke Newington Road, N.

BUSINESSES FOR DISPOSAL

(continued.)

WELL-FITTED Branch Business for Sale in West of England town of 3,500 population; large country district; returns £5 per week under management, capable of great increase; all new and handsome fittings and shop-rounds, including York-glass dome-top jars; small rent and very moderate rates; price £100. Apply, 85/5, Office of this Paper.

£10 brings opening for a fortune, especially Welshman; growing colliery village of over 3,000 inhabitants crying out for Chemist; nearest opposition (unqualified) 2½ miles, qualified 5 miles; nearest large town 17 miles; building rapidly; splendid chance for a beginner. Further particulars apply, "B. B." (210/28), Office of this Paper.

£60; Chemist's Business for Disposal in a North Lancashire health resort; rapidly-growing district; splendid opportunity for a young man with small capital; established 4 years; particulars stamp. Apply, "Rex" (210/25), Office of this Paper.

£35; West of England; neat little Drug Store; populous working-class neighbourhood; no opposition within ½ mile; nicely fitted; now managed by lady who has other business; suit young man who would push and give whole time; great scope for increase; rent £16 only. 3 Clifton Road, Exeter.

£100.—Moderate outlay will convert into valuable Pharmacy attracting dense population, substantial proportion first class; unopposed, busy centre; marketing thoroughfare, N.W.; near Liptons, Home and Colonial, Fitch, Sainsburys, provision shops, other trades represented by real live firms; aged vendor's breakdown demands retirement; bargain; Dentistry addition meet pressing want. 214/2, Office of this Paper.

TENDERS.

DRUGS AND DRUGGISTS' SUNDRIES.

THE Guardians of the Poor of the Parish of St. Mary, Islington, invite **TENDERS** for the **SUPPLY OF DRUGS AND DRUGGISTS' SUNDRIES**, for twelve months commencing 27th day of March, 1910, to be delivered at the St. John's Road Workhouse, the Cornwallis Road Workhouse, the Highgate Hill Infirmary, the Hornsey Road Schools, Receiving Homes, Hornsey Rise, and the Outdoor Dispensaries of the parish.

Scaled tenders must be delivered at the undermentioned offices on or before Tuesday, March 1, 1910, addressed to the Guardians, and endorsed "Tender for"

The tenders will be opened at a meeting of the Guardians to be held on Thursday, March 3, 1910, at the undermentioned offices.

The Guardians do not bind themselves to accept any tender.

Printed forms of tender (which alone will be received), and which contain conditions of contract, must be obtained from the Clerk personally, or a stamped addressed brief-sized envelope may be sent.

By order,

EDWIN DAVEY, Clerk.

Guardians' Offices,
St. John's Road, Upper Holloway, N.,
February 8th, 1910.

FOR SALE.

EXECUTORS' SALE.—Mahogany Fittings, 60 Drawers, Glass Knobs and Labels. Shelving above, 6 Lockers below, stands about 10 ft. by 12 ft.; Counter-case and Shop-rounds. 213/4, Office of this Paper.

MODEL Printing Press, No. 2, with quantity of type; the Sole Right of a Patent suitable for Druggists' Sundriesman; the Sole Right of a Proprietary Article, a most attractive registered name, suitable for a Financial Syndicate. 213/14, Office of this Paper.

SMART up-to-date Fixtures, Fittings. Shop-rounds, Maroon Dome Jars, etc. Walwin, Chemist, Gloucester. Tel. 844.

TO LET.

DOUGLAS, ISLE OF MAN.—To be Let, with possession on the 12th May, a Shop, dwelling-house, and premises, with every accommodation; the premises are situated in Victoria Street, the leading thoroughfare in the town, and have recently been occupied by a Chemist and Fancy Goods Dealer, but would, for a suitable tenant, be altered to suit any business. Apply to R. Whiteside, Selborne Road, Douglas, or to G. S. Johnson, Advocate, Athol Street, Douglas.

SHOP to Let, at Shepherd's Bush, W.; absolutely exceptional opportunity; corner of Askew Road and Goldhawk Road; for Chemist's; splendid opening for this trade in the district; one of a handsome block of 9 recently erected; most populated district; a very busy trading centre; large spacious shop; 17 ft. by 35 ft. deep; sitting-room, dining-room, 3 large bedrooms, kitchen, scullery, bathroom, 2 w.c.'s; back entrance; electric trams pass the door to all parts; to be Let to a responsible tenant only at a low rental; caretaker on the premises. Apply, owners, Teuten & Co., Ltd., 221 Upper Thames Street, E.C.

TO Chemists Commencing.—An opportunity occurs to a young man of unexceptionable references as to financial soundness and personal respectability to rent a fully-fitted Chemist's Shop; large and commodious house, with old garden behind; in best part of a rapidly-developing seaside resort, where there is not, and never has been, a Chemist established on his own account; rent £65 a year for seven years, with option of renewal at £80 a year at the end of the term. Apply to Pelham & Bridges, Selsey-on-Sea, Sussex.

PARTNERSHIPS.

GENTLEMAN (30), experienced in high-class Dispensing businesses, with thorough knowledge of Surgical-instruments and Surgeons' requirements, desires appointment in Wholesale house, with a view to Partnership, or would join a limited company; capital up to £2,000; last berth 6 years with Manchester surgeon's house. "Radix" (210/21), Office of this Paper.

PHARMACIST desires Partnership with view to succession in good Cash Business in North of England; good Prescriber. Apply, 85/9, Office of this Paper.

PARTNERSHIP.—An exceptional opportunity of entering one of the best-established high-class houses in the trade; capital required not less than £5,000; preference given to an efficient, energetic, qualified gentleman, not more than 35 years of age. Apply, in first instance, by letter, with full particulars and experience, to "H." c/o J. H. Smith, Solicitor, 20 Finsbury Square, E.C.

APPRENTICESHIPS.

ST. ALBANS.—A well-educated youth required as Apprentice (indoors) in an old-established, good-class Family and Dispensing business. Elkins & Fisher, St. Albans.

REFRACTIONIST.—F.S.M.C., F.I.O., in North of England water-ing-place in splendid practice. Refraction work exclusively on professional lines, also teacher of Visual Optics, Sight-testing, etc., has vacancy for premium Pupil; this promising profession thoroughly taught and prepared for examinations. Apply, 210/13, Office of this Paper.

AGENCIES.

PRACTICAL and experienced Agent wanted to find capital and undertake flotation and management of valuable and lucrative Proprietary Article. Address, in first instance, to 207/33, Office of this Paper.

REPRESENTATIVE covering the Eastern Counties regularly can have an additional Agency with connection on the ground, on expenses and commission basis; the lines to be sold are mostly Packed Goods. "Norwich" (87/3), Office of this Paper.

BUSINESSES WANTED.

ADVERTISER requires a Business in Scotland; returns from £700 to £800; cash given. 207/38, Office of this Paper.

BRISK Business; genuine; capital about £500; larger business where remainder of purchase money would be allowed to stand over preferred, but smaller one entertained; London or suburb. Full particulars to "Confidential" (210/31), Office of this Paper.

WANTED, a genuine Business in healthy district; returning from £16 to £20 weekly; profits must be good; must bear strictest investigation; small town or seaside preferred. Send full particulars to "Pharmacist," 2 Clevedon Road, Blackpool.

WANTED, a sound Business with turnover £1,000 to £1,500. Send full particulars, in confidence, to "J. W." (211/21), Office of this Paper.

MESSRS. BERDOE & FISH desire to inform intending vendors that they have a number of cash buyers still unsuited and desirous of purchasing Businesses returning from £800 to £2,000; strictest confidence can be relied upon and a speedy transfer assured. Address, 35 Jewry Street, Fenchurch Street, E.C.

WANTED, in London or suburbs, small Retail Business, preferably lock-up; small rent; suitable for Prescribing and Dentistry. Reply, with particulars of locality, price, rent, etc., to 213/32, Office of this Paper.

WANTED, small Business on South Coast; Kent preferred; must be capable of increase and in good situation. Write "W. P." (210/27), Office of this Paper.

WANTED, to purchase a small Business; price moderate; London suburbs or reasonable distance; please state rent, returns, and net profit in first letter (confidential). 213/40, Office of this Paper.

SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond, prepaid.

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This Blackboard demonstrates that Advertisers using these columns get a ready response to their announcements. The figures only refer to some of the letters RECEIVED AT OUR OFFICE on behalf of advertisers who use a number or nom de plume.

ANSWER IN TERMS OF THE ADVERTISEMENT AND

REMEMBER you are one of possibly hundreds applying for the same position. Put your case before the advertiser so that he may be able to form a MENTAL PICTURE of your suitability.

BRIEF BUT CLEAR—millions of applications are consigned to the waste-paper basket UNCONSIDERED, because the reader cannot form this picture from the inadequacy of the materials set before him.

REPLIES TO ADVERTISEMENTS may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

TO SAVE TROUBLE.

MANY correspondents answering advertisements in this Supplement enclose remittances to cover the cost of forwarding their letters to advertisers who prefer to be addressed c/o this Office. The Publisher desires to make it clear that the Advertiser pays postal charges in such cases, and perhaps this reminder will obviate the necessity of the constant return of remittances which forgetfulness of this fact entails.

RETAIL.

ABERDARE.—Wanted, immediately, Improver for Mixed business (outdoors). State salary required, reference, etc., Tudor Williams, Chemist, Aberdare.

ALDERSHOT.—Wanted, immediately, smart Junior Assistant; interview essential. State full particulars in first application, Allen & Lloyd, Aldershot.

BEDFORD.—Doctor requires unqualified Dispenser; age not over 25; salary beginning 25s. Apply, "L. & P.," c/o Mr. Wyatt, 31 Tavistock Street.

BIRMINGHAM.—Junior Assistant; must be a good Counterman and Dispenser; accustomed to good-class trade. Applicants please give full particulars of age, height, experience, salary required (outdoors), and, if convenient, enclose photograph, to Hedges & Son, Dale End, Birmingham.

BIRMINGHAM.—Smart Junior Assistant wanted for Light Retail, Dispensing, and Photographic business; a little time for study or to attend classes if required. Reply, with full particulars and salary required, to Owles, 570 Moseley Road, Birmingham.

BRIGHTON.—Chemist-Optician wanted for six months, while F.S.M.C. taking Minor; must be reliable Dispenser and good Counterman; able to test sight and fit frames. Apply, with full particulars, to "Brighton," c/o Mr. A. E. Grey, 13 Spencer Street, Clerkenwell, London.

BRISTOL.—Active Junior; 21; outdoors; keep stock and assist at Counter; hours 8.30 till 8.30 p.m., Saturdays 9.30; one early night; alternate Sunday evenings. References and experience to "Manager," Presley's, Tram Centre, Bristol.

BROMLEY (Kent).—Wanted, gentlemanly Assistant, about 24 years; height 5 ft. 8 in.; Manipulative Surgery and Analysis. R. C. Davenport, Chemist, Bromley, Kent.

BURTON.—Junior, smart, with good experience; knowledge of Photography and Agricultural trade; outdoors; no duty. State age, salary, and full particulars, with references, enclosing photo (first-class trade done in Garden Seeds and Sundries), Francis Hallam, Ltd., 22 High Street, Burton-on-Trent.

CARDIFF.—Qualified Assistant to Manage a Branch; must be a good Salesman and Prescriber, with a knowledge of Photographic trade. State age, height, salary, references, and enclose photo, to "Chemicus" (212/37), Office of this Paper.

CASTLE CARY.—Assistant required for Country Retail, Stationery and Newspaper attached; time off for study if required; outdoors. Apply, giving full particulars, references, and salary required, to F. S. Moore, Castle Cary, Somerset.

SITUATIONS OPEN *(continued).*

CHESTERFIELD.—Junior (age about 22), accustomed to good-class Retail and Dispensing. Apply, stating salary required, with references and photo, to T. Furness & Son, The Pharmacy, Chesterfield. (Applications not answered in 3 days declined.)

DEMERARA.—Two Assistants required for leading business; must be of good appearance; not exceeding 28; Dispensers and possessing good varied experience; salary (three years' agreement) £75, £85, £95 (indoors); first-class passage paid. Apply, by letter, "S," Baiss Bros. & Stevenson, Ltd., 4 Jewry Street, E.C.

HYDE.—Wanted, at once, for a good-class Mixed Business in manufacturing town near Manchester, a smart, qualified Assistant; must be good Counterman and Dispenser; outdoors; reasonable hours; no night or Sunday duty; half-holiday weekly; comfortable berth to suitable man. Full particulars with photo in first letter, Geo. Wild, Chemist, Hyde.

INDIA.—Wanted, by Messrs. F. Higate & Co., Chemists, Calcutta, Minor man; single; age under 28; must have had good Retail experience and first-class character; passage paid out and home at the expiry of the 4 years' agreement. Apply, stating age, experience, etc., to 198/11, Office of this Paper.

LEEDS.—Wanted, qualified Junior Assistant, with high-class experience in Dispensing and Retail Counterwork; outdoors. Apply, with full particulars, to C. F. Thackray, 68-70 Great George Street, Leeds.

LICHFIELD.—Wanted, Junior Assistant (about March 1); outdoors; unqualified; must have good Dispensing experience. Apply, stating age, height, and salary required, Charrington, 17 Market Street, Lichfield, Staffs.

LIVERPOOL DISTRICT.—Smart, qualified Manager wanted for Branch; outdoors; permanency; must possess undeniable references and have good knowledge of Photography; good window-dresser. Reply, giving usual particulars as to age, salary, etc., to Budden & Co., Ltd., 26 London Road, Liverpool.

LIVERPOOL.—Wanted by Chemist close to School of Pharmacy, a Part-time Assistant, who is desirous of attending full-time Classes; hours 8.30 to 10 A.M., 1 to 2 P.M., and 5 to 7 P.M.; splendid opportunity for young man who is anxious to earn while studying. Apply to "N. Y. Z." (210/30), Office of this Paper.

LONDON, N.W.—Assistant wanted (indoors). Apply, with photo and full particulars, to S. Allen, 137 Queen's Crescent, N.W.

LONDON, S.W.—Qualified Assistant, of good address and experience, wanted at once; knowledge of Optics essential. E. W. Hill, 240 Earl's Court Road, S.W.

LONDON, W.—Smart Assistant wanted; qualified preferred; must be good Dispenser and Counterman, with knowledge of Photographic trade, and have good references. Apply, personally or with photo, to Gould, 10 High Road, Chiswick, W.

LONDON, W.C.—Qualified Assistant; outdoors; good Dispenser with Continental experience; preference given to one who can speak French fluently; hours moderate. Give full particulars of experience, height, age, and salary required, to Frizell, Chemist, Leicester Square, W.C.

LONDON, W.C.—Required, immediately, smart, capable Assistant (outdoors), with London experience; hours 1 to 12 P.M.; salary and commission; good references essential; personal application preferred. Apply, Haynes, 72 Southampton Row.

LONDON, S.E.—Wanted, smart, energetic Manager for high-class Store trade. Apply, giving full particulars, to Sydney Smith & Sons, 26 Kirkdale, Sydenham, S.E.

LUTON (Beds).—Qualified Manager (outdoors), good Prescriber and Counterman, required; close at 8, half-day Wednesday; one with knowledge of Dental work preferred; must have good reference; permanency. State age, height, salary required, and photo (if possible), Chantler, Chemist, 191 London Road, Luton, Beds.

MAIDENHEAD.—Assistant, in good-class business. Give full particulars of experience, age, salary required, also photograph (if possible), A. Upson, Chemist and Optician, Maidenhead.

MANCHESTER.—Qualified and Unqualified; Qualified for Branch; hours 8.30 A.M. to 9.30 Mondays and Fridays; Tuesdays, Wednesdays and Thursdays 9; Saturdays 11; Sundays 6 to 9; alternate Wednesdays off 1 to 6 and full half-day; Unqualified Junior, elderly Assistant, or lady, for small Drug Store. Salary and full particulars, 211/40, Office of this Paper.

NEWCASTLE-ON-TYNE.—Unqualified Assistant, gentlemanly, in appearance and address; good salesman and window-dresser; no Dispensing done, only Proprietaries kept, chiefly Photographic and Lantern; a thoroughly competent man, well up in good-class Cameras and Apparatus liberally dealt with. Photo (if possible), salary, and full particulars to John Watson, 34 Grainger Street, Newcastle-on-Tyne.

SOUTH AFRICA.—Qualified Assistants open to accept situations in South Africa should write to Lennon, Ltd., 54-58 Queen Elizabeth Street, London, S.E., who frequently hear of vacancies.

SHANGHAI.—Wanted, qualified Assistant, between 25 and 35 years; single; 4 years' agreement; salary £12, £14, £16, £18 per month for the 4 years respectively; second-class passage paid both ways. Apply, sending photograph, "Shanghai," c/o Evans Sous Lescher & Webb, Ltd., London, E.C.

TORQUAY.—Qualified Assistant for Dispensing business; competent to take charge; outdoors; married preferred. Applicants please give full particulars of experience, state age and height, and, if possible, enclose photo, Fredk. March, 90 Belgrave Road, Torquay.

WESTON-SUPER-MARE.—Wanted, at once, a capable Assistant; indoors; well up in Dispensing and accustomed to quick Light Counter trade. Apply, with photo if possible, and all necessary particulars, to Joseph Hicks, Chemist, Weston-super-Mare.

WOOLTON.—Wanted, good Assistant; Dispensing, Retail. Send photo with full particulars to Taylor, Chemist, Woolton.

WORCESTER.—Qualified (indoors) for Dispensing and Light Retail; comfortable home; half-holiday; duty between 3. If possible send photo, W. T. Horniblow & Son, Chemists, Worcester.

WORTHING.—Assistant wanted; unqualified; good-class business; seaside town. Send particulars, with references, to W. Aston, Pharmaceutical Chemist, Worthing.

WINDSOR.—At once, Assistant, about 24; high-class business and Dispensing; indoors. Send full particulars to S. Furnival, Pharmaceutical Chemist, 6 Lower Belgrave Street, S.W.

BALKWILL & CO. have a vacancy, at once, for a qualified Assistant; one used to first-class Dispensing and Retail. Outdoor. Apply, stating age, height, experience, and salary required, also enclosing photo, to F. W. Hunt, 105 Old Town Street, Plymouth.

BRANCH Manager, qualified, about 25 to 30 years of age, married, to live over business premises; must be energetic and have had good-class experience in Dispensing and Cash Retail, and specially well up in Photography. State all particulars as to salary required, etc., Roberts & Co., Wallington, Surrey.

DISPENSER.—Wanted, qualified Assistant, chiefly for Dispensing and occasional Counter work; must have had good Dispensing experience with first-class firms, be neat, accurate, and courteous; permanency; easy hours; opportunity. Apply, with full particulars, enclosing photo, Philip Harris & Co., Ltd., Birmingham.

ENERGETIC Assistant; qualified; indoors; good appearance; quick salesman; able to take sole charge when required; references must bear strict investigation; photo; salary £65 to commence. Write, Critchlow, Chemist, 161 Monument Road, Edgbaston, Birmingham.

J. T. DAVIES (late Grose), Chemist, Swansea, has a vacancy for a first-class qualified Dispenser; outdoors; hours easy. Write, with full particulars as to salary, etc. (enclose photo).

QUALIFIED Assistant required in middle-class quick business; willing to devote considerable part of time to Canvassing for Wholesale Orders; age about 25; outdoors. Please send full particulars in first instance to 212/20, Office of this Paper.

QUALIFIED Branch Manager wanted, at once; accustomed to good-class business; must be energetic and resourceful; references must bear the strictest investigation. Apply, enclosing recent photograph, to 211/19, Office of this Paper.

QUALIFIED; Relief; Wednesday, whole day, 9 to 9; Dispensing and Stock; easy distance from London. 87/41, Office of this Paper.

SENIOR, Assistant required, immediately after Easter, for Dispensing Department; age not over 30; must have had first-class London experience; good references and qualification indispensable. Apply to "F." c/o T. Morson & Sons, Wholesale Druggists, Elm Street, London, W.C.

SMART Assistant required; high-class Light Retail Dispensing business; Yorkshire City; well up in Photography; good Salesman, Dispenser, and Widow-dresser; single; about 24; unqualified; usual hours; no Sunday duty. Applicants please send full particulars of age, height, experience, and salary required (outdoors), enclosing photograph (returnable), to £5/54, Office of this Paper.

WANTED (for March 14), an Assistant, about 24-25; must be reliable Dispenser and good Counterman; one with London or suburban experience preferred. Thos. Davies, Pharmacist, 485 King's Road, West Chelsea.

WANTED, qualified Senior for Branch; suit elderly man desirous of comfortable berth with moderate salary; Extractor preferred, but not essential. Apply, Griffiths, Chemist, Droylsden.

WANTED, an Assistant, about 23 to 25, qualified, for Dispensing business; London or South Coast experience preferred. State salary (indoors), experience, and full particulars, 210/35, Office of this Paper.

WANTED, smart, gentlemanly Junior (temporarily), with first-class references; outdoors; good worker at stock; £2 and fare. Herbert Jenkins, Braintree, Essex.

HERE'S A CHANCE FOR BOTH SEXES!!!—Sanitary Inspectors—School Nurses—Lady Health Visitors. £100-£350. All those desiring change should qualify for above appointments; postal course of lessons now commencing for examinations in London and Provinces, Scotland, Ireland, and Colonies; 450 successful candidates; fully half had no previous sanitary knowledge; fee 25s. Mushens, Sanitary Expert, Sunderland.

WHOLESALE.

CHEMISTS' Wholesale Traveller wanted for Glasgow and district and South of Scotland by a well-known firm of Wholesale Druggists and Manufacturing Chemists; must be energetic and have thorough knowledge of the trade and a good connection amongst Chemists, Doctors, and Veterinary Surgeons. Applications, strictly confidential, stating age, full particulars of experience, with ground covered, turnover, salary required, and photograph, if possible, 5/8, Office of this Paper.

CLERK wanted by Wholesale Manufacturing Chemists; able to Superintend Orders and keep Books; good references indispensable. Apply, stating salary required and all particulars, to 28/34, Office of this Paper.

INVOICE Clerk required for the town and country desk of a London Wholesale Manufacturing Druggists' house; only those with a knowledge of the trade need apply. State previous experience and salary required to "Extension," c/o Streets, 30 Cornhill, E.C.

JUNIOR Clerk wanted; some experience of the trade; neat writer, accurate at figures. Apply, 86/3, Office of this Paper.

JUNIOR Invoice Clerk in Wholesale Druggists; must be quick and had experience in Extending and Invoices. "F. G." (86/2), Office of this Paper.

PHARMACIST, young, smart, and up-to-date, required by a firm of London Wholesalers; previous Wholesale experience not necessary, but must have good knowledge of Pharmacy and Therapeutics. Reply with full particulars as to age, experience, salary, etc., to "Anglo" (87/55), Office of this Paper.

REPRESENTATIVE; experienced; fully conversant with all branches of Sundries; salary, expenses, and commission; permanency to good man. State fullest particulars, past experience, and ground worked, 213/33, Office of this Paper.

WANTED, Travellers to Represent Dr. Smith's Solution to call upon Chemists, Dentists, and Extractors generally; this preparation is a fine Side-line. Apply, letter only, Dr. Smith, 150 Oxford Street, London.

WANTED, Travellers in Drugs and Sundries to call or send Lists. Morgan, Maesyraf, Treallaw, Rhondda.

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(Colonial, Indian, and Foreign).

1s. for 12 words or less; **6d.** for every 10 words beyond, prepaid. Replies addressed to this office will be forwarded to the advertiser for an additional charge of **6d.**

This heading is reserved for assistants seeking situations in the British Colonies, India, and Dependencies or elsewhere abroad.

CHEMIST (30) seeks Management; disengaged September next; English, South American, and Indian experience; Aërated Waters, Photography, etc.; excellent references. "Ganges" (206/17), Office of this Paper.

COLONIES or India.—Advertiser desires to Represent or otherwise engage with good house handling Chemical Apparatus, Scientific Instruments, etc.; thorough knowledge of Colonial and Indian requirements. 212/2, Office of this Paper.

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MANAGER or Senior; qualified; 32; good references; disengaged. Bach, Blithfield, New Malden.

QUALIFIED; 27; Senior or Branch Manager; April 1. McLanaachan, Spa Pharmacy, Cheltenham.

MANAGER, qualified, good references, desires change; disengaged April. Apply, 207/9, Office of this Paper.

LONDON.—Capable Assistant; first-class experience; French, German; photo. Apply, 210/4, Office of this Paper.

QUALIFIED Manager or Assistant; good Prescriber; tall; excellent experience; abstainer. 210/2, Office of this Paper.

JUNIOR or Improver requires berth in good-class business; 3½ years' experience; good references. Apply, 209/4, Office of this Paper.

JUNIOR; 22; tall; good appearance; time for study; outdoors preferred. G. T. Almeroth, Egremont House, Heigham Road, East Ham.

LIVERPOOL and District.—Junior requires permanency; outdoors; excellent references; 4 years' experience. 208/33, Office of this Paper.

AS Manager; 38; qualified; disengaged; good all-round experience; Home Counties or West of England preferred. 208/37, Office of this Paper.

YOUNG lady, long experience, seeks situation in Chemist's as Stockkeeper; would assist in any department. Apply, 207/36, Office of this Paper.

LOCUM; qualified; disengaged; reliable; town or country; good references; now looking future engagements. Padwick, 45 Penwortham Road, Streatham.

UNQUALIFIED (25), 9 years' Retail, desires situation (end of March) as Traveller or in Wholesale; good references. "S." Hendon House, Ashby-de-la-Zouch.

JUNIOR (21), 5 ft. 10½ in., seeks situation in a good Dispensing business; all-round experience; South Coast preferable, not essential. Williams, Pharmacy, St. Clears.

JUNIOR (21) requires good-class Dispensing and Counter berth; West End or South Coast preferred; 4 years' London, S.W., experience. "P. P." 2 Francis Terrace, Carmarthen.

MANAGER; qualified; middle-aged; good Counterman. Prescriber, Window-dresser; middle or working class locality; preferred. Address, "Pyro," 142 King's Cross Road, W.C.

MANAGER or Locum; experienced Buyer, Prescriber, and Extractor (own instruments); disengaged. Mr. Watson, Registered Chemist and Dentist, 851 Ashton Old Road, Manchester.

MISCELLANEOUS.

MCADAM & TUCKNISS, Sharedealers, Bank Chambers, Blackheath, S.E. Telephone 81 Lee Green.

SHARES FOR SALE (free of commission, subject).—20 Apollinaris, £3; 500 Baku Oil, 5s.; 150 Bovril Deferred, 6s. 6d., c.d.; 20 Evans Lescher Preference, £5 3s. 9d.; 150 Schweppes Deferred, 7s. 7½d.; 100 Watford Preference, 10s. 9d.

WANTED (subject).—100 Bleasdale, 96s.; £300 Idris Debentures, 62; 100 G. B. Kent Preferences, 16s. 9d.; £200 Hirst, Brook & Hirst Debenture, 500 A. J. White, 9s. 10½d., please offer.

List of shares for sale and wanted sent free on application. Bankers, London County and Westminster. Established 1898.

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PHILIP JOSEPHS & SONS, LTD., have the largest stock of Fittings, Cases, Counters, etc., etc., in the world; all in excellent condition and ready for immediate dispatch; very low prices to clear. Call and see or write for particulars, stating requirements, to 93 OLD STREET, LONDON, E.C.

WE HAVE WHAT YOU REQUIRE, Drug Fittings, Counters, Wall-cases, Dispensing-screens, Perfume-cases, etc., in almost all sizes; second-hand; condition first-class; prices reasonable. Write for sketches and details giving approximate sizes, or call and inspect RUDDUCK & CO., 262 OLD STREET, E.C.

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CHEMISTS' SHOP-FITTINGS (SECOND-HAND). — Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens, counters with glass-case fronts, wall-cases, bent-front and flat-top counter-cases, counter-desks, tooth-brush cases, complete shop-rounds, etc.; every requisite for chemists; extensive stock to select from at extremely low prices; practical men sent to all parts; illustrated catalogues and estimates free. MATTHEWS, CHEMISTS' FITTER, 14 and 16 MANCHESTER STREET, LIVERPOOL.

PLAKE-GLASS Shelves, Window-fittings, Carboys, Counters, Drug-fittings, Dispensing-screens, Wall-cases; second-hand; send for list; cheapest house for high-class fittings; complete Chemist fitters; estimates and designs free; men sent to all parts. TREBLE & CO., Shop-front Builders, Ringwood Road, Walthamstow, London.

CHEMISTS' AND DRUGGISTS' FITTINGS, SHOW-CASES, etc.—Second-hand, in good condition. Call Congdon & Son, 77 Clerkenwell Road, E.C.

POISONS SCHEDULE, according to the New Act, reprinted from THE CHEMIST AND DRUGGIST, with a supplementary list of admixtures, preparations, and other articles brought within the Schedule. On a card (Schedule in front, list at the back) to hang up; price 6d., post free, from the Office of the C. & D., 42 Cannon Street, London, E.C.; or at the published price (4d.) from the leading Wholesale houses.

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"MODERN PHYSICIAN" (5 large vols., latest edition), edited by Dr. Andrew Wilson, F.R.C.S.; cost 37s. 6d.; will accept 25s., or nearest offer. Dr. Scott, Deramore Park, Belfast.

WHAT offers for Garrod's "Materia Medica," Clowes's "Practical Chemistry," Beasley's "Book of Prescriptions," Bentley's "Botany"? All in good condition. "THALAMIFLORE" (211/37), Office of this Paper.

FORMULÆ.

RECIPE for sale; black boot-polish. FRANCE, 42 Vartry Road, London, N.

PROPRIETARY ARTICLES.

WHAT offers, Kerol powder and liquid, 6d. and 1s. sizes; Kerol shaving-sticks and toilet-soap, quite new, about 3 doz. each. 210/17, Office of this Paper.

36 1s. KEROL disinfectant; 36 6d. Kerol disinfectant; 36 1s. Kerol powder; 24 5d. Kerol soap; 12 10d. Kerol shaving-sticks; 9 1s. Lano Kerol; price 7s. 6d. per doz. 1s. size and equivalent. 210/22, Office of this Paper.

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SHARES.

SHARES for sale. See p. 88.

SHOP FITTINGS.

SET De Graves' 2-in. counter scales, new. Offers to C. CLARK, Chemist, Blairgowrie.

44 SHOP-ROUNDS, 12 syrups; good condition; 30s. lot, or offer. RALPH'S Drug Stores, Grimsby.

MISCELLANEOUS.

TO Rubber-buyers.—Two damaged water-beds for sale. SPENCER, Chemist, Wycombe.

SMOKELESS oil heater, good condition, 11s. 6d., cost 23s. 6d.; dental forceps, 2s. each. 215/8, Office of this Paper.

SECOND-HAND soda-water machine and gross syphons; a money-maker for the right man: full information given. Apply, MERCHANT, Shakespeare Street, Southport.

DENTAL forceps, set 7 plated, 20s., few odd 3s. each; microscope etc., 25s.; 3 pairs midwifery forceps, 7s. 6d.; assay balance and weights, 8s. 6d. HICKMAN, 5 Abbotts Road, Southall.

FOOT'S patent Turkish and medicated bath, copper fittings, new condition, cost 6 guineas, price 32s. 6d.; secretaire, fall-down front bureau, 45s. DAVIS, 52 Station Road, Wood Green.

WANTED.

WANTED, pill-machine, 2-grain, in good condition. EVANS, Chemist, Margate.

OLD artificial teeth bought; cash return post. BROOKE, 34 Trinity Street, Boston.

DENTAL tools and materials; cheap for cash. SECRETARY, Zander House, Chesterfield.

NEST of drawers, 9 or 12 ft. by 2 or 3 ft., labelled or unlabelled. WATTS, Chemist, Mortlake.

WANTED, pill-mass mixer, 4, 6, or 8 lb.; good make. Price to WARDLE, Mosses Gate, Bolton.

WANTED, 11-ft. chemist's counter, glass-case front, second-hand. SPURGE, Oatlands Park, Weybridge.

SUPAL ordinary shares. State quantity and price to "PHARMACIST" (208/1), Office of this Paper.

WANTED, one or more good proprietaries; cash. Full particulars, "PERS." (209/41), Office of this Paper.

WANTED, to purchase any proprietary article showing medium wholesalẽ trade in Lancashire. WARDLE, Mosses Gate, Bolton.

OPTICAL books; Minor, Major, Chemists' books; send prepaid for valuation; cash offers per return. GOWER, Bookseller, Waterloo, Liverpool.

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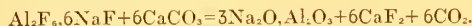
THE CHEMIST AND DRUGGIST," in good condition, bound or unbound, Vols. I.-IX. (1860-1869), Vol. XXXI. (1897), Vols. XXXII. and XXXIII. (1898), Vols. XXXVIII. and XXXIX. (1891), Vols. XL. and XLI. (1892), also the indices for the years 1876 and 1881. "Export Department," Kegan, Paul & Co., 43 Gerrard Street, Soho, London, W.

Chemical Society.

A MEETING was held at Burlington House on Thursday, February 18, Professor H. B. Dixon, F.R.S., in the chair. There was an unusually large attendance, attracted by the announcement that the Thomsen Memorial Lecture would be delivered by Sir Edward Thorpe, K.C.B. The President stated that the Council had at its last meeting made the usual nominations for officers of the Society during the next session. The most interesting of these are the selection of Dr. G. T. Morgan as Secretary in place of Dr. M. O. Forster, who becomes a Vice-President, and the nomination of Sir Boverton Redwood as a Vice-President and of Professor Adrian Brown, Dr. J. C. Philips, and Dr. A. C. Mackenzie to places on the Council. Dr. F. B. Power becomes an auditor of the Society's accounts. The President then called on Sir Edward Thorpe to give his lecture on

JULIUS THOMSEN.

Commencing with the statement that Thomsen was not only a scientist, but also a technologist and a publicist, the lecturer suggested that he answered to Priestley's definition of a perfect man. For many years he served in the Municipal Council of Copenhagen, and to him in no small degree that city owes the perfection of its gas, sewage, and water works. Comparatively little is known of Thomsen's early years, except that his parents were of no high social position and were in straitened circumstances. He was born on February 13, 1826, at Copenhagen, and was educated at the local Polytechnic. He attended none of the great schools of chemistry, and it cannot be asserted that any of the great masters of chemistry influenced his work in any marked degree. After the publication of his first paper he secured a scholarship which enabled him to travel in France and Germany, and this time he seems to have devoted to inspecting laboratories. At the close of his academical career he undertook teaching and literary work, and finally in 1866 he was appointed professor of chemistry at Copenhagen University, a position he retained until 1901, when he retired, though he still resided in Copenhagen and continued his research work. Thomsen is best known in this country through his thermo-chemical researches, which he began in 1855 and continued almost to the last. His chief results were published in "Thermo-chemische Untersuchungen," a work in four volumes, of which a Danish edition appeared in 1905. This Danish edition was translated into English by Miss Burke, who added to it a useful re-statement of Thomsen's views in terms of modern notions regarding affinity and ionisation. Thomsen has also claims to recognition as a technologist. In 1850 he invented a process of utilising cryolite as a source of caustic soda and alum. This mineral occurs in large quantities in Greenland, and the inventor was fortunate in securing from the Danish Government a monopoly of all the cryolite mined in Greenland; this, however, he shared eventually with the Natrona Works at Pittsburg, which also worked his process, which depends on heating an intimate mixture of cryolite and limestone, when the following reaction occurs:



The sodium aluminate is washed out with water and decomposed by carbon dioxide, forming aluminium hydrate, used for making alum, and washing-soda, which can then be rendered caustic. This process has been carried on for years at Oersund in Denmark and at Natrona, near Pittsburg, and was apparently very lucrative to the inventor, who himself worked out all the technological details and designed all the plant for the Oersund establishment. Passing to more general matters, Sir Edward Thorpe stated that probably Thomsen's early hardships were responsible for his dour, taciturn, fighting character. It is said that even in his own circle he rarely divested himself of his serious manner, and he had none of that personal magnetism which enables a professor to become popular with his students and to found a school of workers. His work was well recognised in his own country and abroad. The citizens of Copenhagen raised

a public statue to him during his lifetime, and in this country he received from the Royal Society, jointly with Bertholet, his thermo-chemical rival, the Davy medal.

A vote of thanks to the lecturer was proposed by Sir W. A. Tilden, and seconded by Professor James Walker.

TWO PAPERS

were taken after the lecture—viz., one by Mr. Wooton "On the Resolution of Racemic Aldehydes," and the other by Dr. Findlay on "The Solubility of Gases in Colloidal Solutions." The latter paper showed that certain gases are more soluble in colloidal solutions than in water, a fact of some significance in connection with the physiological absorption of gases by blood. A ballot for the election of Fellows was held during the evening, but by an oversight the result was not announced. No pharmaceutical candidates were in the list.

Coming Events.

This Section of the "C. & D." is reserved for advance notices of meetings or other events which are sent to the Editor by Wednesday of the week before the meetings, etc., occur.

Monday, February 28.

National Union of Assistant Pharmacists, Newcastle-on-Tyne Branch, 14 Pilgrim Street, at 8.15 P.M. Special address.

Wednesday, March 2.

Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, London, W.C., at 11 A.M. Council meeting.

Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, at 3 P.M. Council meeting.

Society of Chemist-Opticians, St. Bride's Institute, Ludgate Circus, London, E.C., at 8 P.M. Mr. F. S. Horsey on "Recent Progress in Optical Projection."

The Opticians' Club, Masonic Hall, Anderton's Hotel, Fleet Street, London, E.C., at 8 P.M. Smoking concert. Tickets from Hon. Secretary, 8a Tiverton Mansions, Gray's Inn Road, W.C.

Bristol Pharmaceutical Association, "The Firs," Clarendon Road, Redland, at 8 P.M. Discussion on pharmaceutical matters, to which all qualified chemists are invited.

Thursday, March 3.

The Chemical Society, Burlington House, Piccadilly, London, W., at 8.30 P.M. Among the papers to be communicated are: "Phenomena observed when potassium mercuric iodide is dissolved in ether and water," by Mr. J. E. Marsh; "The action of ethyl cyanoacetate on

5-chloro-1:1-dimethyl- Δ^4 -cyclohexen-3-one," by Dr. A. W. Crossley and Mr. C. Gilling; "The Constitution of carpine" (Part I), by Mr. G. Barger.

Great Yarmouth Pharmaceutical Association, 156 King Street, at 8 P.M. Monthly meeting.

Chemists' Assistants' Association, 73 Newman Street, Oxford Street, London, W., at 9 P.M. Mr. F. J. R. Bennett on "Eminent Scientists."

National Union of Assistant Pharmacists, Bristol Branch, at 9 P.M. Literary evening by Mr. F. Brookes, Ph.C.

Pharmaceutical Society of Great Britain, Local Organisation, Parliamentary Division of North Lambeth, Duke's Room, Holborn Restaurant, London, W.C., at 8 P.M. Musical reunion.

Friday, March 4.

Royal Institution of Great Britain, Albemarle Street, Piccadilly, London, W., at 9 P.M. Dr. Charles Chree, F.R.S., on "Magnetic Storms."

Dundee Chemists' Assistants' and Apprentices' Association, Mather's Hotel, at 8.30 P.M. Competition essays.

THE ANNUAL DINNER of the Institute of Opticians is to be held at Frascati's Restaurant, Oxford Street, London, W., on March 10. Tickets (5s. each) from Mr. J. Harcombe Cuff (Hon. Secretary), 25 Friern Barnet Road, New Southgate, N.

SIR WILLIAM H. WHITE, K.C.B., D.Sc., F.R.S., late Chief Constructor to the Admiralty, will present the prizes and certificates to the students of the South-Western Polytechnic Institute, Chelsea, S.W., on March 11, at 8 P.M.

THE ANNUAL DINNER of the Chemists' Assistants' Association will be held on March 17 in the International Hall, Café Monico, London, W. Tickets (5s. each) from Mr. A. R. Arrowsmith (Hon. Secretary of the Dinner Committee), 4 Stratford Place, W.

THE Liverpool Branch of the National Union of Assistant Pharmacists is organising a smoking-concert to take place at the Bear's Paw Restaurant, Lord Street, on February 16. Tickets (1s. each) from the Hon. Secretary, 427 Mill Street.

College Notes.

SQUARE F.C. v. SOUTH OF ENGLAND COLLEGE F.C.—This football match, played at Shepherd's Bush on February 19, resulted after a good game in a win for the former by 4 goals to 3.

NORTHERN COLLEGE OF PHARMACY.—The students of this college paid a visit to factories and warehouses of Messrs. Evans Sons Lescher & Webb, Ltd., on February 17, where an instructive and pleasant afternoon was spent. The company afterwards entertained the party at the King's Café.

BATTERSEA POLYTECHNIC.—At the annual conversazione on February 19, the new pharmaceutical and chemical laboratories were open for inspection. Among the large number of interesting exhibits, Mr. C. Edward Sage, F.I.C., Ph.C., with the aid of Mr. Thomas Whiffin, of Battersea, gave a complete display of cinchona barks and quinine salts. The interest of many pharmacists centred in this exhibit, and the pharmaceutical machinery (exhibited by Messrs. J. J. Griffin & Sons, Ltd.), which they surrounded. For the analytically-inclined visitor the collection of chemical apparatus claimed attention. During the evening lectures and demonstrations were given on the following subjects: Oils, fats, waxes, and soap; radium emanations; "Aeneitic Physick" (by Mr. Sage); paper-making and artificial silk; and colour photography. Arrangements are now complete for full-time day classes for Minor and Major students to commence in April next, and also for evening classes. The courses are well adapted for any student who may afterwards desire to continue and take a degree as an internal student of the London University.

The Week's Poisonings.

NINE fatalities, including two misadventures, have been recorded from poisoning during the week.

Carbolic Acid was responsible for the self-inflicted death of William Lunn (58), publican, Swineshead.

Laudanum.—An overdose of this opiate caused the accidental death of Margaret Kidd (69), widow, Wallsend.—At Donaghmore, co. Tyrone, a man named Jas. Ledgerwood drank an ounce of laudanum as a sleeping-draught, and was found dead in bed in the morning. At the inquest the jury returned a verdict of death from misadventure.

Oxalic Acid.—Alfred Cotton (39), packer, killed himself at Poplar by taking oxalic acid.—At Coventry on Wednesday, an inquest was held regarding the death of Henry Charley (64), engine-driver, who died after drinking poison. Mr. Newton, chemist, Earl Street, spoke to supplying a man with a pennyworth of oxalic acid on Sunday evening. The man said he wanted it for cleaning brass with. Witness had seen the body of the deceased, and recognised him as the customer. Dr. Loudon, police surgeon, deposed that the sediment in the glass from which Charley drank was oxalic acid. Verdict accordingly.

Potassium Cyanide was the poison taken at Islington, London, N., with suicidal intent by an unemployed silver-smith named Arthur Plume (31).—George Thomas Groom, a member of the Littlehampton Urban Council, ended his life by taking the same poison.

Prussic Acid was used for lethal purposes by an armourer named Ernest Ivan Oliver (27), in Regent's Park, London, N.W.

Strychnine.—At the resumed inquiry into the death of Mr. Scott, East Bierley, the analyst reported that a fatal dose of strychnine was present in the deceased's stomach. The house-keeper deposed that she had never seen in the house the bottle produced, which was labelled "Strychnine Hydrochloride." A stud-groom stated that deceased gave him a note and 2s. on February 5 to buy some strychnine from a chemist at Birstal. He did not know by whom the note was written. The inquiry was again adjourned.

Kind not Stated.—An Ealing jury returned a verdict of "suicide while of temporary unsound mind" at the adjourned inquiry into the death of Kate Carter (39), of West Ealing. The evidence showed that deceased had pork and rabbit for dinner on the Sunday, and subsequently a dose of Epsom salts. An adjournment was made for an analysis of the stomach contents, but the analyst reported that death was due to some irritant poison, the nature of which he was unable to state. However, death was certainly not caused by ptomaine-poisoning.